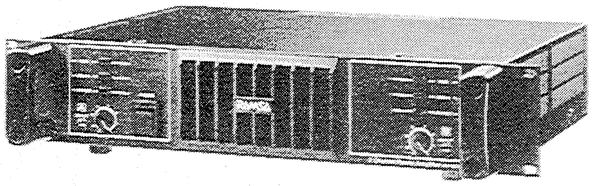
ORDER NO. AVD86100226A2

Service Manual

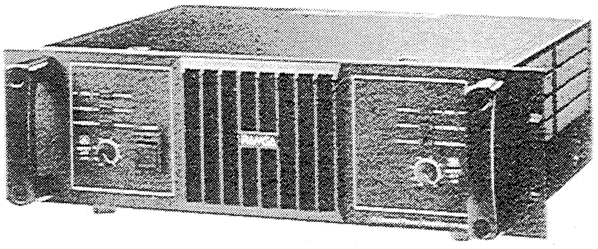
2-channel Power Amplifier

WP-9110E/9220E

RAMSA



WP-9100E



WP-9220E

National/Panasonic

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

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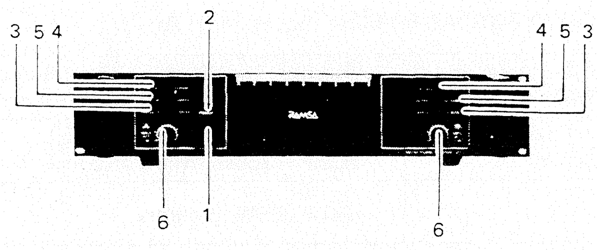
SPECIFICATIONS

	WP-9110E	WP-9220E
Power supply:	110/120/220/240V AC 50/60Hz (Set at 240V AC)	
Power consumption:	Approx. 633W at the rated output of 150W (RMS) + 150W (RMS)/4 ohms	Approx. 1184W at the rated output of 300W (RMS) + 300W (RMS)/4 ohms
Rated power output:	100W + 100W (RMS, 8 ohms) 150W + 150W (RMS, 4 ohms)	200W + 200W (RMS, 8 ohms) 300W + 300W (RMS, 4 ohms)
Mono-bridge output:	300W (RMS, 8 ohms)	600W (RMS, 8 ohms)
Frequency response:	20 to 20 kHz ±0.5 dB (at Rated Output)	
Total harmonic distortion:	0.05% or less (8 ohms, 100W + 100W, 20 to 20 kHz) 0.1% or less (4 ohms, 150W + 150W, 20 to 20 kHz) 0.1% or less ([BRIDGE] 8 ohms, 300W, 20 to 20 kHz)	0.05% or less (8 ohms, 200W + 200W, 20 to 20 kHz) 0.1% or less (4 ohms, 300W + 300W, 20 to 20 kHz) 0.1% or less ([BRIDGE] 8 ohms, 600W, 20 to 20 kHz)
Crosstalk:	60 dB or more (20kHz)	
Intermodulation distortion:	0.05% or less (8 ohms, 100W, 60 Hz : 7 kHz = 4 : 1)	0.05% or less (8 ohms, 200W, 60 Hz : 7 kHz = 4 : 1)
Damping factor:	100 or more (8 ohms, 1 kHz)	
SN ratio:	100 dB or more (IHF A.W.T.D.)	
Input level:	+4 dB (continuously variable), balanced	
Voltage gain:	27 dB	30 dB
Input impedance:	40 kohms (balanced)	
Monitor output: VU meter output: Relay terminals:	+14 dB, 300 ohms (7.5 kohms optimum) No-voltage make contact (contact capacity: DC 24V, 1A)	
Connectors:	Input: 3-pin XLR-type connectors (male, and female), and 1/4" tip-ring-sleeve phone jack (3-pin connection) Output: Screw terminals, and 1/4" tip-sleeve phone jack	
Dimensions:	480 (W) x 100.5 (H) x 383 (D) mm (Height includes rubber feet and depth includes rear panel rubber stays.)	480 (W) x 144.5 (H) x 383 (D) mm (High includes rubber feet and depth includes rear panel rubber stays.)
Weight:	Approx. 13 kg	Approx. 17.5 kg
Finish:	Panels: Black alumite Cabinet: Dull black finish	
Accessories:	Mounting clips .... 4 Operating Instructions .... 1 Filter 1	
Option:	WP-Q01 { Connector pin .... 8 Nylon connector .... 2 Protective cap 2	

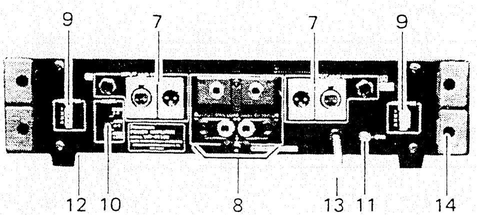
MAJOR OPERATING CONTROLS

- WP-9110E

- Front Panel:

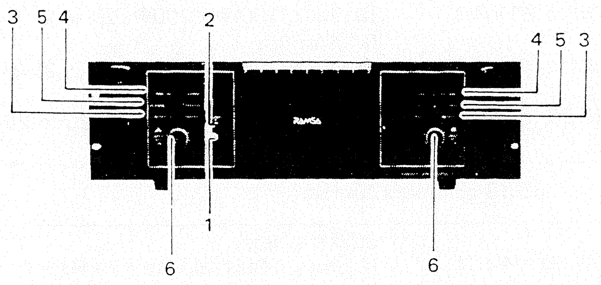


- Rear Panel:

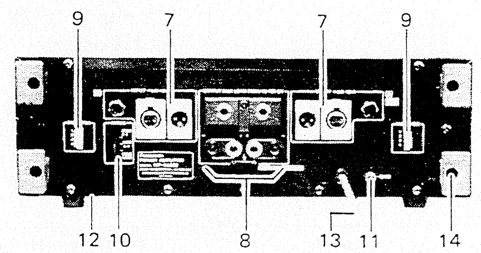


- WP-9220E

- Front Panel:



- Rear Panel:



1. **Power Switch** [POWER]
   - The power amplifier reaches the operating conditions within 4 to 6 seconds after turning on the power switch due to a muting circuit which prevents switching noise of power-up.

   CAUTION:

   When using the WP-9110E/9220E in a system with other equipment such as a mixer, equalizer, crossover, etc., always turn the amplifier on last as switching noise from the other equipment can damage the speakers. Similarly, at system power-down always turn the amplifier off first.

2. **Power ON indicator lamp** [POWER] **(red)**

   Indicates that the amplifier is turned on.

3. **Protect indicator lamp** [PROTECT] **(red)**

   This LED indicates that the muting circuit is activated and therefore sound cannot be produced at the output. This occurs for 4 to 6 seconds when the amplifier is turned on, and also during overheating or any malfunction that may cause damage to the speakers.

4. **Peak level indicator lamp** [PEAK **(red)** [A] , [B]]

   Sound is distorted as soon as the PEAK LED (red) lights. Should this occur, either adjust the output level of the mixer or adjust the power amplifier Input Level control so that the PEAK LED turns off.

5. **Signal Indicator** [SIGNAL **(green)** [A] , [B]]

   Lights when the signal level reaches − 20 dB below the rated output level.

6. **Input level control** [INPUT ATT [A] , [B]]
   - When this control is at "0" the amplifier will reach its rated power output when the input signal is at a level of +4dB.
   - The calibrated markings on the front panel indicate the amount of attenuation applied to the input signal. This allows proper volume setting of the speakers when the input signal source is at its rated level.

7. **Input connectors** [INPUT [A] , [B]] **+4 dB, 40 kΩ, balanced**
   - Three types of input connectors are provided: XLR-type connectors (male, female) and 1/4" tip-ring-sleeve phone jack.
   - These input connectors are connected in parallel internally. Do not connect more than one input signal to these connectors at the same time.
   - When using amplifier in bridge mono mode, connect the input signal to [A] channel only. Any signal connected to [B] channel will not be passed.

8. Output terminals [SPEAKER 4Ω MIN $\boxed{A}$, $\boxed{B}$]

■WP-9110E

○ 8Ω .... 100W + 100W (RMS)
4Ω .... 150W + 150W (RMS)
○ Bridge .... 8Ω 300W (RMS)

○ When using in bridge mode, the + side of the $\boxed{A}$ CH output terminals becomes the hot side, and the + side of the $\boxed{B}$ CH output terminal becomes the cold.

■WP-9220E

○ 8Ω .... 200W + 200W (RMS)
4Ω .... 300W + 300W (RMS)
○ Bridge .... 8Ω 600W (RMS)

○ When using in bridge mode, the + side of the $\boxed{A}$ CH output terminals becomes the hot side, and the + side of the $\boxed{B}$ CH output terminal becomes the cold.

CAUTIONS:

- Do not connect the output channels in parallel.
- When using bridge connection, always use minimum 8Ω speakers. Never connect the speakers between + and − of $\boxed{A}$ CH, or + and − of $\boxed{B}$ CH.

9. Remote monitor output connection [MONITOR $\boxed{A}$, $\boxed{B}$] (4-pin)

Connect this terminal for remote monitoring of the amplifier output: (See page 4)

*The remote monitoring operates as soon as the muting is released after switching on the power supply.

10. Mode selector, [MODE]

STEREO $\boxed{A}$ · $\boxed{B}$
MONO $\boxed{A}$ · $\boxed{B}$
BRIDGE $\boxed{A}$ ONLY

When using either MONO Mode or Bridge Mode the input signal must be applied to the $\boxed{A}$ Channel only.

11. Ground terminal [GND]

An external amplifier ground terminal.

- Turntable ground leads may be connected here. Ungrounded turntables may produce hum-noise.

12. AC voltage selector

For power source voltage setting.

13. AC power cord

110V/120V/220V/240V AC 50/60Hz · approx. 2.5m. AC plug is not provided with the AC power cord. Procure an AC plug locally and connect it with the cord.

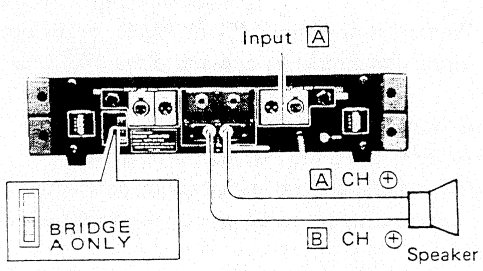
14. Rear panel rubber feet

These are rubber feet to protect the input and output terminals against damage. However, do not stand the power amplifier on them during performance.

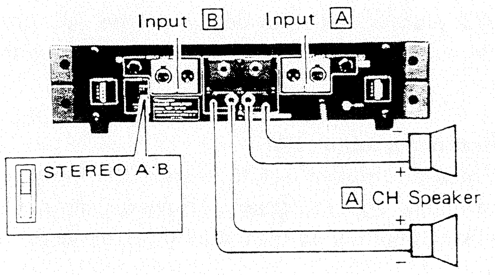
CONNECTIONS

■ WP-9110E

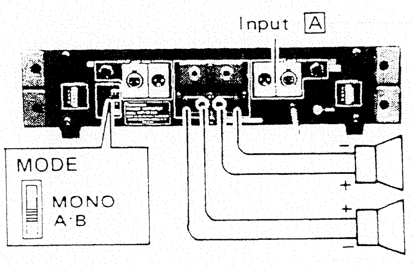
For 1 input: [BRIDGE]


Input A
BRIDGE
A ONLY
A CH ⊕
B CH ⊕
Speaker

For 2 inputs: [Stereo or 2 channels]

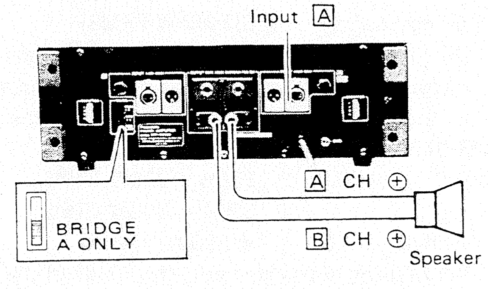

Input B
Input A
STEREO A·B
A CH Speaker
+
−

For 1 input: [Mono]

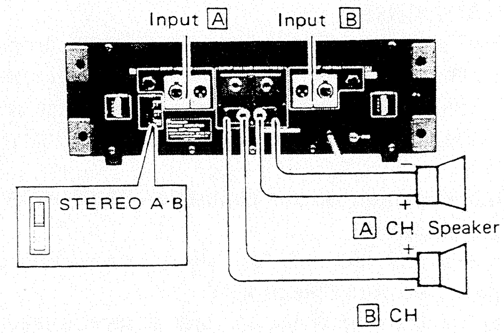

Input A
MODE
MONO
A·B
−
+
+
−

■ WP-9220E

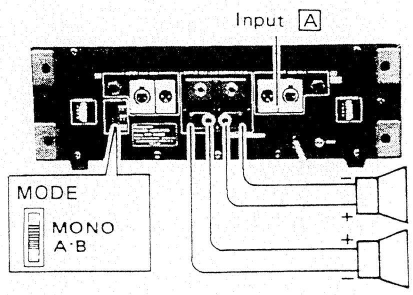
For 1 input: [BRIDGE]


Input A
BRIDGE
A ONLY
A CH ⊕
B CH ⊕
Speaker

For 2 inputs: [Stereo or 2 channels]


Input A
Input B
STEREO A·B
−
+
A CH Speaker
+
−
B CH

For 1 input: [Mono]


Input A
MODE
MONO
A·B
−
+
+
−

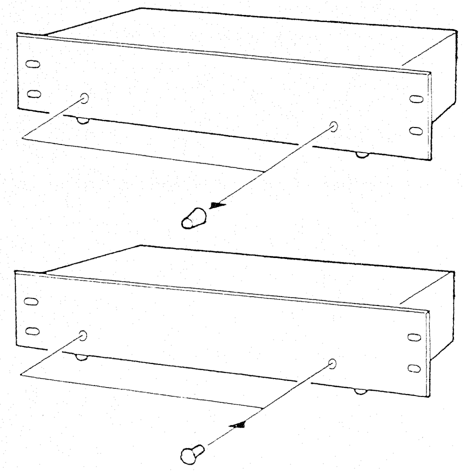
CAUTIONS:

- Connect the speakers after selecting either bridge, mono, or stereo.
- When using bridge connection, never connect the speakers between ⊕ and ⊖ of A CH or B CH.

■ Protective Cap Installation (OPTION)

After adjusting the input level controls, install the protective covers to protect the controls from tampering as follows.

1. Detach the knobs from the front panel.
2. Insert the protective caps (option) in the holes.



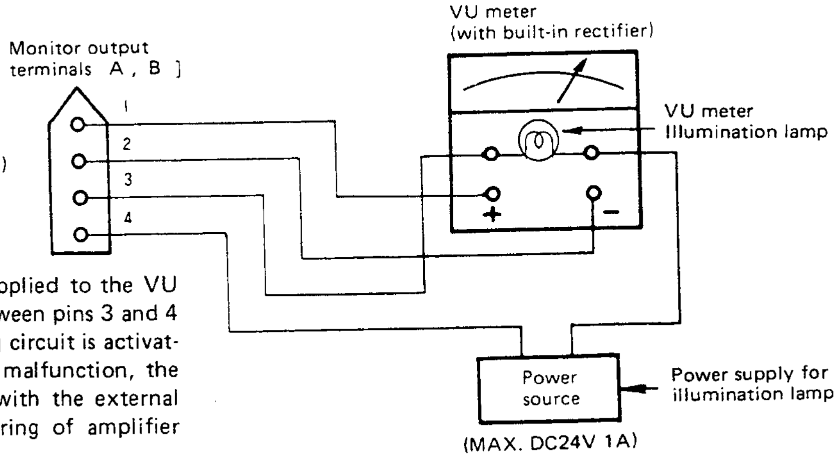
■ Connections of Remote Monitor Output Connectors:

(Example)

1 +14dB 300Ω
(optimum impedance 7.5kΩ)

2 Ground

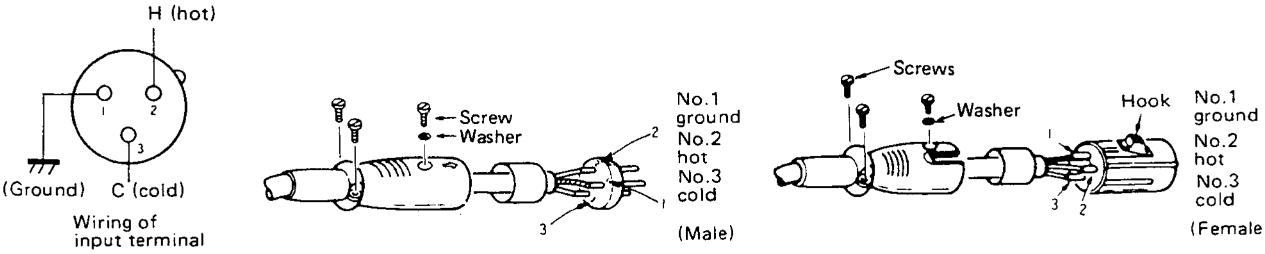
3 } Relay contact
4 } (contact capacity up to DC24V 1A)


Monitor output terminals A, B]
1
2
3
4
VU meter
(with built-in rectifier)
VU meter
Illumination lamp
+
−
Power source
Power supply for illumination lamp
(MAX. DC24V 1A)

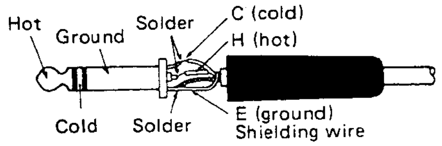
●In this configuration, power will be supplied to the VU meter lamp when the relay contacts between pins 3 and 4 are closed. Therefore, when the muting circuit is activated due to power-up or and amplifier malfunction, the light will go out. So in combination with the external VU meter, this allows remote monitoring of amplifier signal and status.

■ Connection of Plugs and Connectors:

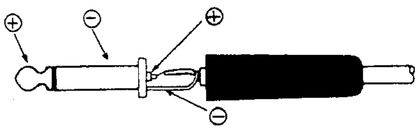
1. Input connector (3-pin XLR-type connectors, male and female)


H (hot)
1
2
3
(Ground)
C (cold)
Wiring of input terminal
Screw
Washer
No.1 ground
No.2 hot
No.3 cold
(Male)
Screws
Washer
Hook
No.1 ground
No.2 hot
No.3 cold
(Female)

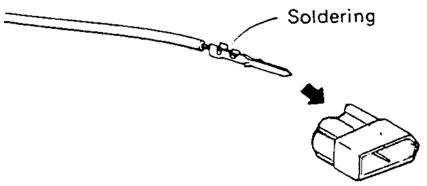
2. Tip-ring-sleeve phone plug


Hot
Ground
Solder
C (cold)
H (hot)
Cold
Solder
E (ground)
Shielding wire

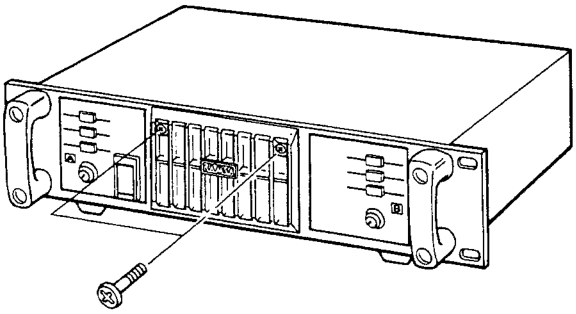
3. Tip-sleeve phone plug (Speaker output terminal)



4. Nylon connector for monitor output (4-pin)(option)



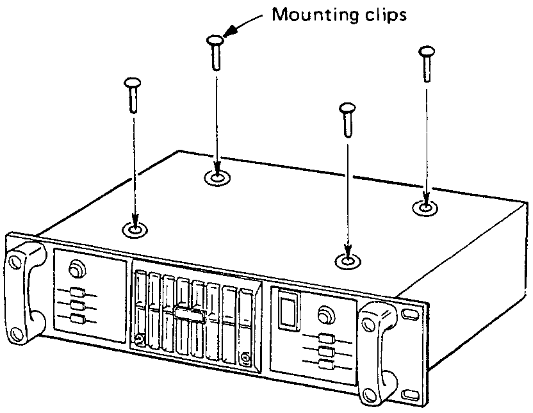
AIR FILTER CLEANING

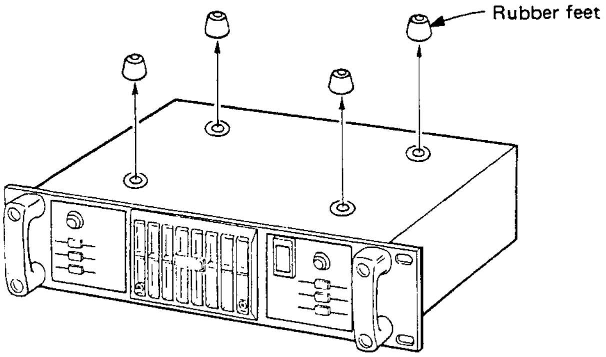


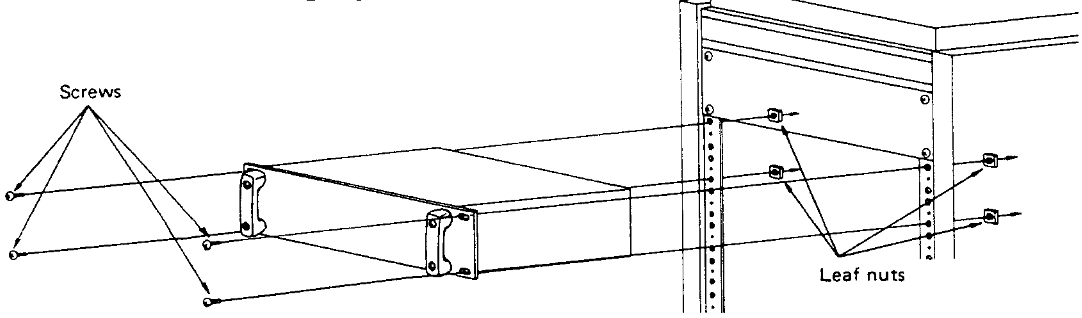
1. Remove the 2 fixing screws and remove the grille.
   *The air filter can now be removed.
2. Wash the filter with water and dry thoroughly.
3. Reinstall the filter and grille in their original positions and replace the fixing screws.

RACK MOUNTING

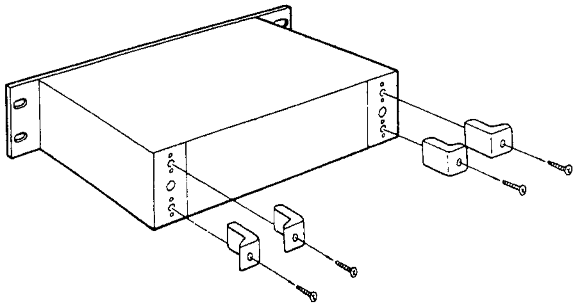
1. Loosen the fixing screws and detach the four rubber feet from the bottom.
2. Insert the mounting clips in the holes for the rubber feet.
3. Mount the power amplifier to the rack with four rack mounting screws (M5 x 12).







Remove the rear panel rubber stay.

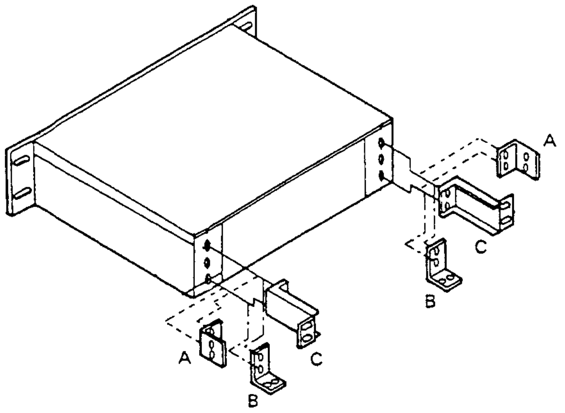


Note:

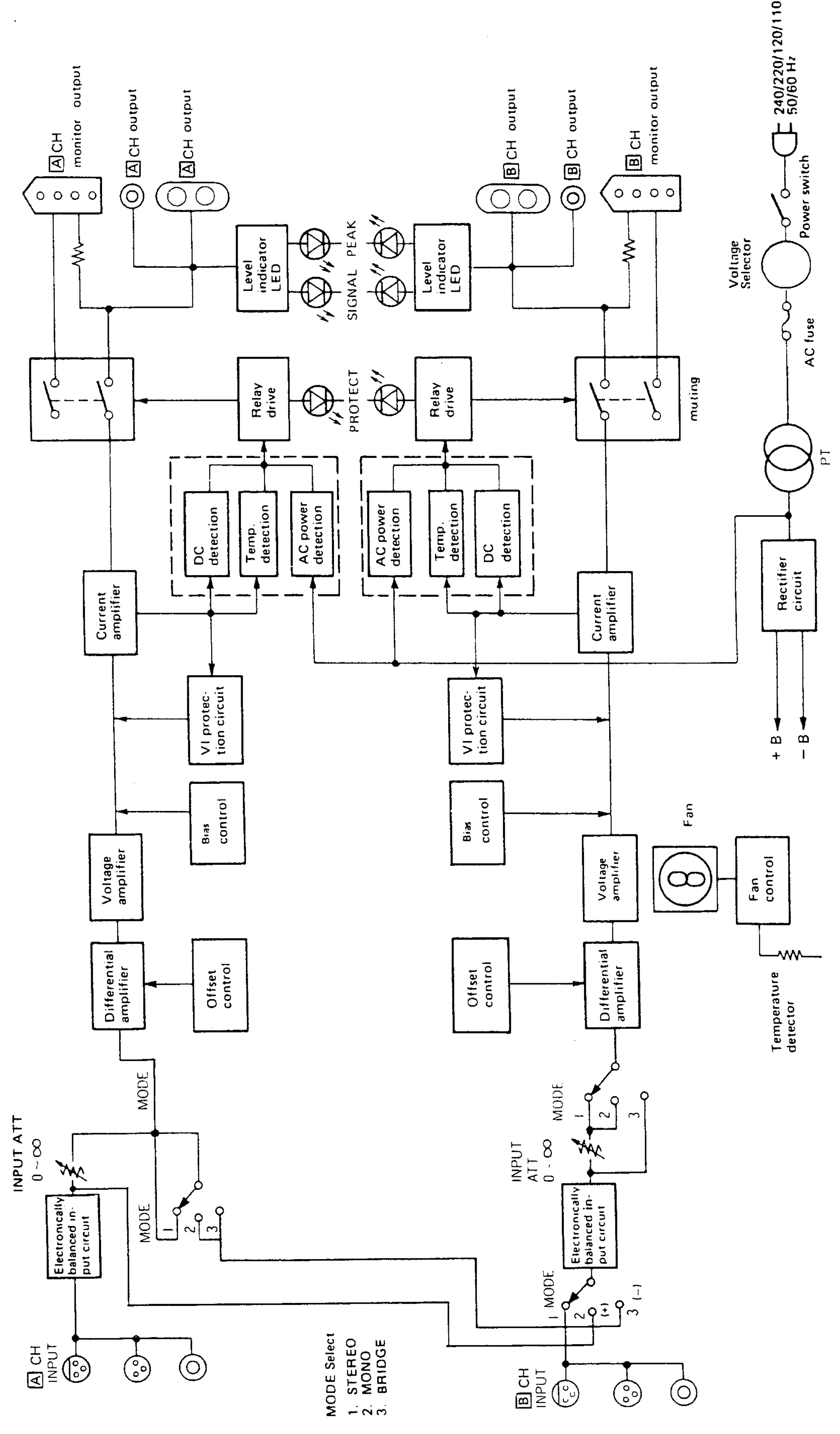
When transporting the machine while mounted in a rack, rear-fixing angles must be installed so that the rear of the amplifier will be secure during transportation. Use an angle with a thickness of at least 2 mm.

Rear-fixing angle:

A ... Rear-fixing angle for mounting side of rack.
B ... Rear-fixing angle for mounting on bottom of rack.
C ... Rear-fixing angle for mounting on rear of rack.



BLOCK DIAGRAM


A CH monitor output
A CH output
A CH output
B CH output
B CH output
B CH monitor output
240/220/120/110V 50/60 Hz
Power switch
Voltage Selector
AC fuse
PT
Level indicator LED
SIGNAL
PEAK
Level indicator LED
Relay drive
PROTECT
Relay drive
muting
DC detection
Temp. detection
AC power detection
AC power detection
Temp. detection
DC detection
Current amplifier
Current amplifier
Rectifier circuit
+ B
− B
VI protection circuit
VI protection circuit
Bias control
Bias control
Fan
Voltage amplifier
Voltage amplifier
Fan control
Differential amplifier
Offset control
Offset control
Differential amplifier
Temperature detector
INPUT ATT 0 ~ ∞
MODE
Electronically balanced input circuit
MODE
1
2
3
MODE
1
2
3
INPUT ATT 0 - ∞
Electronically balanced input circuit
MODE
1
2
3 (−)
(+)
A CH INPUT
MODE Select
1. STEREO
2. MONO
3. BRIDGE
B CH INPUT

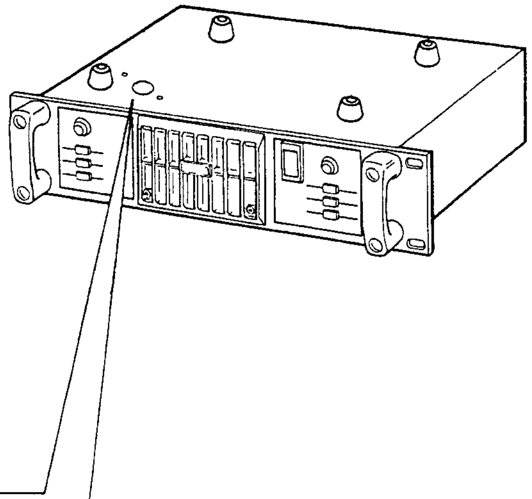
POWER SOURCE VOLTAGE SETTING

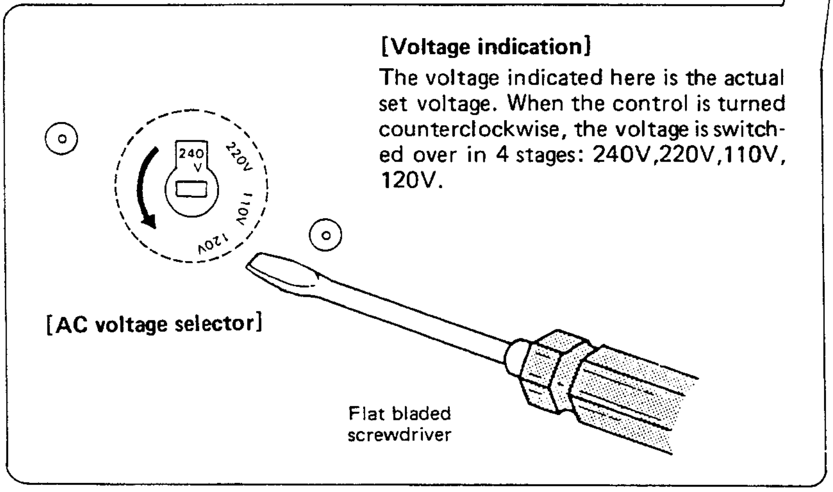
At the time of shipment, the WP-9110E, WP-9220E are set for 240V AC power supply. Before putting it in operation, check the commercial voltage available in your region, and set the AC voltage selector according to the following procedure.

CAUTION:

At the time of setting the AC voltage regulator, invariably disconnect the power plug from its power outlet.
If incorrect voltage is set, the instrument may be damaged.
Make sure that the right power is used.

The AC voltage selector is located on the bottom. Set the voltage at the desired voltage as illustrated below.





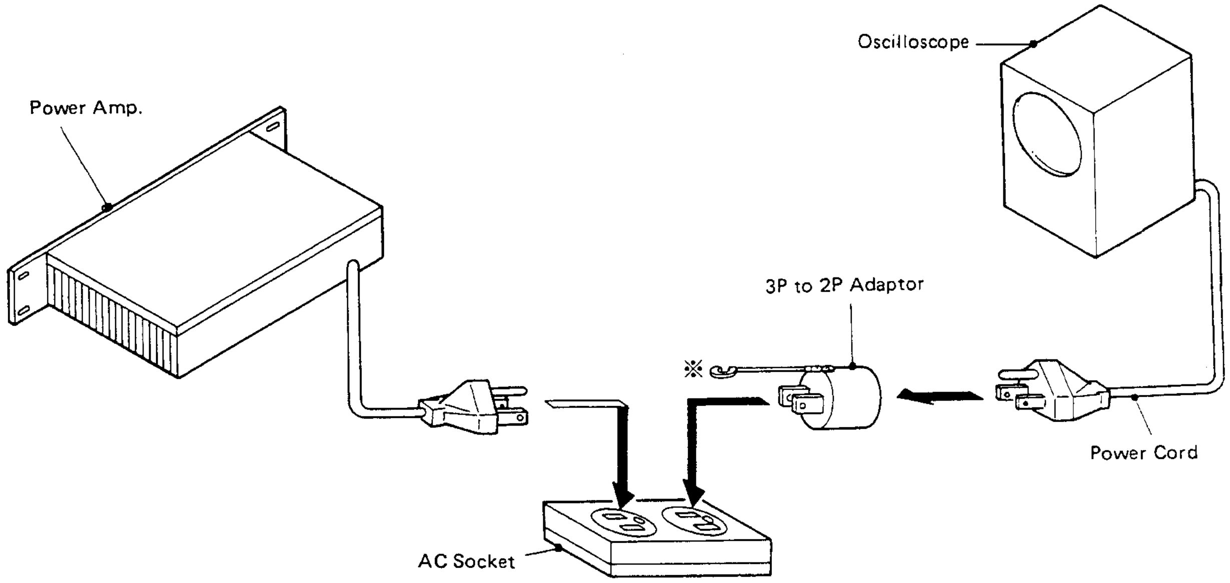
[Voltage indication]

The voltage indicated here is the actual set voltage. When the control is turned counterclockwise, the voltage is switched over in 4 stages: 240V,220V,110V, 120V.

HOW TO LIFT GROUND

CAUTION :

To avoid short-circuit across amplifier output terminals, be sure to ground-lift the ground terminal on the AC line cord of the amplifier or the test equipment when testing the amplifier in bridge mode.

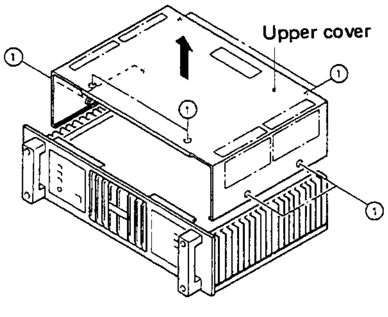

Oscilloscope
Power Amp.
3P to 2P Adaptor
※
Power Cord
AC Socket

※ This terminal must not contact any part of the outlet or plate.

DISASSEMBLY PROCEDURE

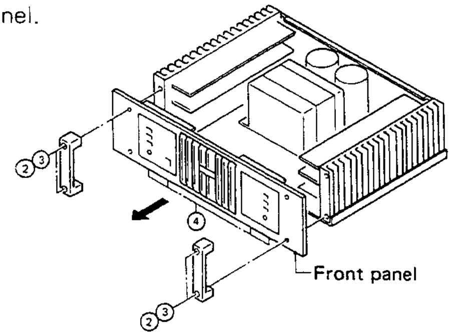
■ UPPER COVER REMOVAL

- ● Remove the eight screws ① and remove the upper cover.


Upper cover
①
①
①
①

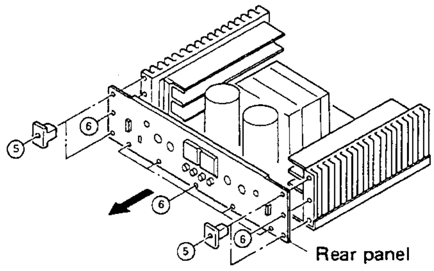
■ FRONT PANEL REMOVAL

- ● Remove the four screws ② and four washers ③, and remove the handles.
- ● Remove the four screws ④ and remove the front panel.


②③
④
Front panel
②③

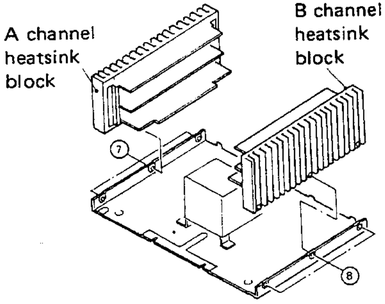
■ REAR PANEL REMOVAL

- ● Remove the four screws ⑤ and remove the cable hook.
- ● Remove the seven screws ⑥ (WP-9220E) of five screws (WP-9110E) and remove the rear panel.


⑤
⑥
⑥
⑤
⑥
Rear panel

■ HEATSINK BLOCK REMOVAL

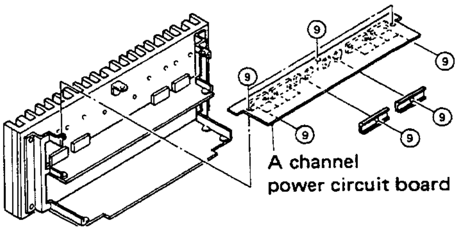
- ● Remove the three screws ⑦ and remove the A channel heatsink block.
- ● Remove the three screws ⑧ and remove the B channel heatsink block.


A channel heatsink block
B channel heatsink block
⑦
⑧

■ CIRCUIT BOARD REMOVAL

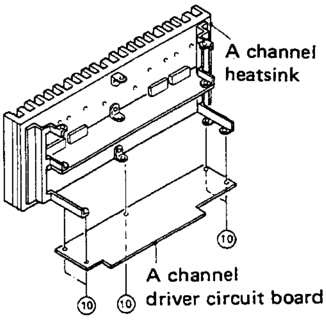
(1) POWER CIRCUIT BOARD REMOVAL

- ● Remove the twelve screws ⑨ and remove the A channel power circuit board.
- ● The B channel power circuit board can be removed in the same way.


⑨
⑨
⑨
⑨
⑨
⑨
⑨
A channel power circuit board

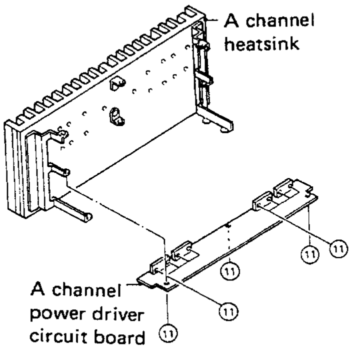
(2) DRIVER CIRCUIT BOARD REMOVAL

- ● Remove the five screws ⑩ and remove the A channel driver circuit board.
- ● The A channel driver circuit board can be removed in the same way.


A channel heatsink
⑩
A channel driver circuit board
⑩
⑩

(3) POWER TRANSISTOR CIRCUIT BOARD (WP-9220 ONLY)

- ● Remove the eleven screws ⑪ and remove the A channel power driver circuit board.
- ● The B channel power driver circuit board can be removed in the same way.


A channel heatsink
⑪
⑪
⑪
A channel power driver circuit board
⑪
⑪

PERFORMANCE CHECK

After performing any repairs to the power amplifier, make the following measurements. Should the measured results differ from those shown, then refer to the adjustment procedures on the indicated pages.

MEASUREMENT	CHANNEL	TEST POINT	RESULT
1. DC OFFSET (Adjustment procedure : page18)	CH.A	Voltage between TP303 and TP302	0 Volts
	CH.B	Voltage between TP603 and TP602	
2. BIAS (Adjustment procedure : page 18)	CH.A	Voltage between TP301 and TP303	13.5 millivolts
	CH.B	Voltage between TP601 and TP603	

3. POWER OUTPUT/THD

Procedure :
- a). Connect a 4-ohm load across the CHANNEL A speaker output terminals.
- b). Set attenuator control on front panel to "0" (maximum).
- c). Apply a 20kHz sine wave to the CHANNEL A input. (Stereo Mode).
- d). Adjust the signal level so that the voltage across the 4-ohm load indicates that the amplifier is at its rated output.

  Power level : WP-9110E ....24.5 Volts (150 Watts)
  WP-9220E........34.6 Volts (300 Watts)

- e). Measure THD at the output.

  THD should be .1% or less.

- f). Repeat steps a)-e) for Channel B.

4. After completing measurements 1-3, repeat DC offset measurement, and readjust if necessary.

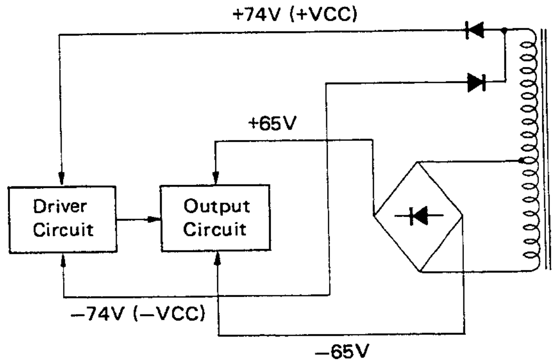
TECHNICAL EXPLANATION

SUPERRAIL SYSTEM

Two separate power supply voltages are used; a ±74 volt supply for the front-end/drive circuit, and a ±65 volt supply for the output circuit. This high-voltage drive stage greatly reduces the possibility of a signal becoming distorted before it even reaches the output stage.

Since the inherent distortion is so low, the amount of negative feedback used is kept to a minimum.

Negative feedback is commonly used to improve the stability of an amplifier, but in doing so may cause some degradation of the sound quality. So by using the superrail system and minimal negative feedback, the sound quality is good even when the amplifier is driven to clipping level, and the high level of stability results in more reliable operation and longer amplifier life.

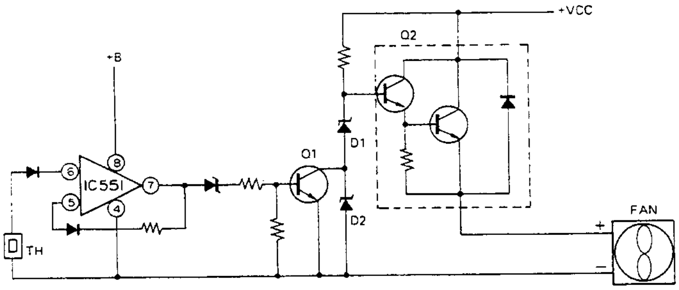

+74V (+VCC)
+65V
Driver Circuit
Output Circuit
−74V (−VCC)
−65V

(Fig. 1)

FAN CONTROL CIRCUIT

At normal operating temperature, the resistance of the thermistor is low. The resulting low voltage at pin 6 of IC551 causes the voltage of pin 7 to go high. This turns Q1 on, effectively putting a short-circuit across zener diode D2. The voltage across D1 is then applied to the base of Q2, which supplies the low level of current required to run the fan at low speed.

As the amplifier heats up, the resistance of the thermistor increases, causing the voltage at pin 6 of IC551 to rise to the point at which pin 7 goes low. This turns Q1 off, causing the voltage across D1 + D2 to be applied to the base of Q2. This increase in forward-bias results in a higher current flow which rotates the fan at high speed.


+VCC
Q2
+B
⑧
⑥
IC551
⑦
⑤
④
Q1
D1
D2
TH
FAN
+
−

(Fig.5)

Voltage/Current Detection Protection Circuit

This circuit protects the output transistors.

If there is an overload or output short by allowing a portion of the input signal to bypass the output transistors.

NOTE: Output transistors Q310, 311 (WP-9100E/9220E) and Q312-315 (WP-9220E only) are not shown.

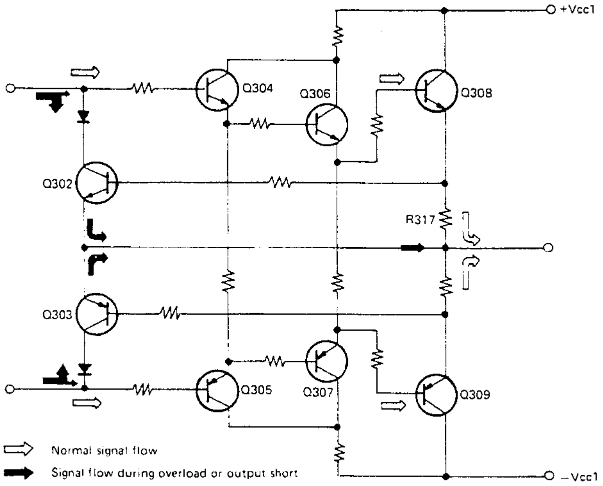
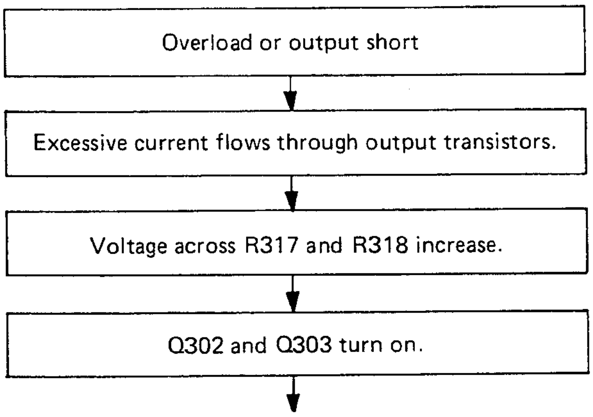

+Vcc1
Q304
Q306
Q308
Q302
R317
Q303
Q305
Q307
Q309
−Vcc1
Normal signal flow
Signal flow during overload or output short

Fig. 1

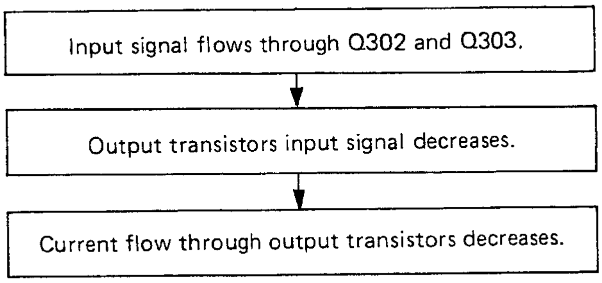


Overload or output short

Excessive current flows through output transistors.

Voltage across R317 and R318 increase.

Q302 and Q303 turn on.



Input signal flows through Q302 and Q303.

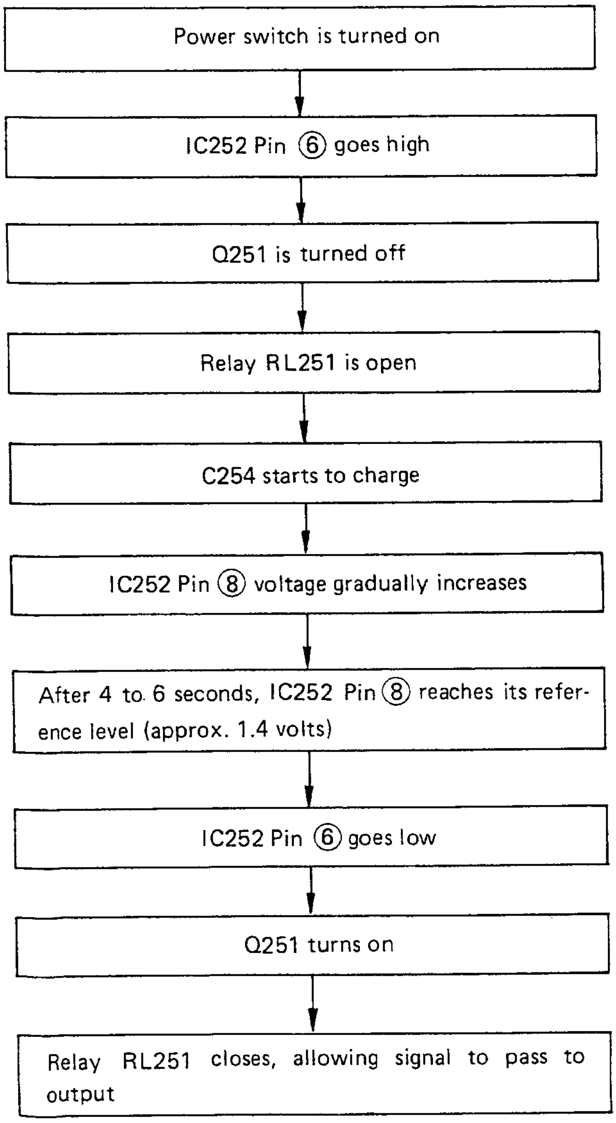
Output transistors input signal decreases.

Current flow through output transistors decreases.

NOTE: The above diagrams refer to "A" channel only. Operation of "B" channel Voltage/Current Detection Protection Circuit is the same. Refer to schematic diagram for correct component reference numbers.

■ Muting Circuit

The amplifier output is operational 5 to 8 seconds after the power switch is turned on, and is disconnected immediately when the power switch is turned off. This prevents any electrical click noise from occurring when the amplifier is turned on and off.



Power switch is turned on

IC252 Pin ⑥ goes high

Q251 is turned off

Relay RL251 is open

C254 starts to charge

IC252 Pin ⑧ voltage gradually increases

After 4 to 6 seconds, IC252 Pin ⑧ reaches its reference level (approx. 1.4 volts)

IC252 Pin ⑥ goes low

Q251 turns on

Relay RL251 closes, allowing signal to pass to output

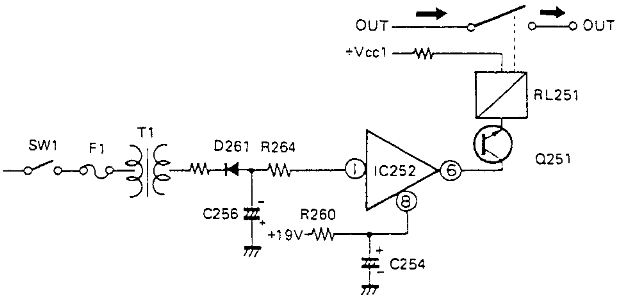
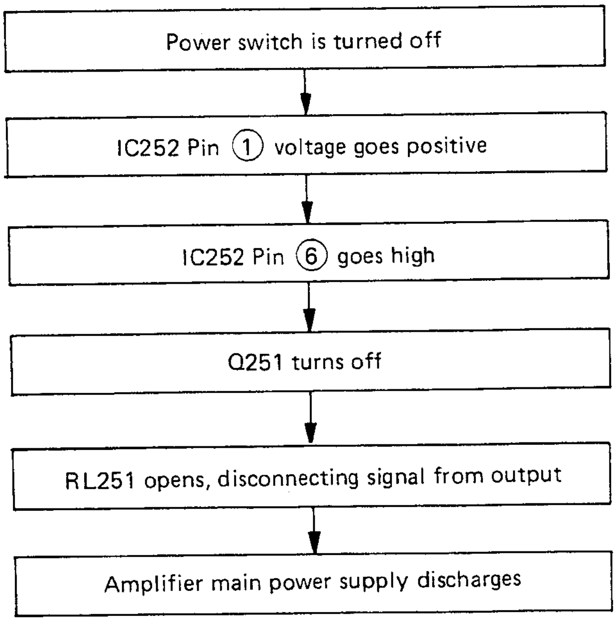


Fig. 2



Power switch is turned off

IC252 Pin ① voltage goes positive

IC252 Pin ⑥ goes high

Q251 turns off

RL251 opens, disconnecting signal from output

Amplifier main power supply discharges

NOTE: The above diagrams refer to "A" channel only. Operation of "B" channel Muting Circuit is the same. Refer to schematic diagram for correct component reference numbers.

DC Detection Circuit

This circuit protects the speakers by disconnecting the output if a DC component is present at the output.

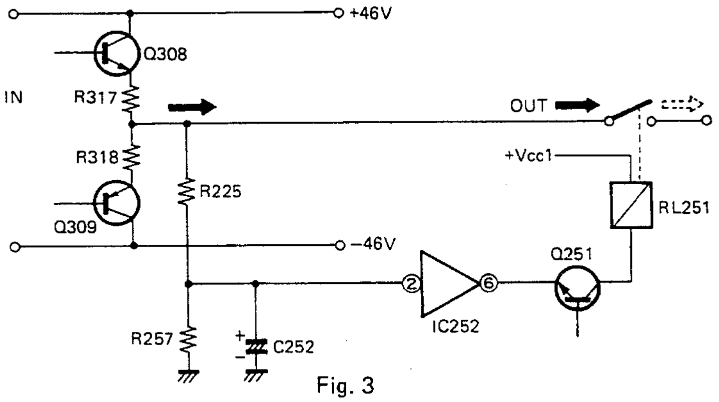

+46V
Q308
IN
R317
OUT
R318
+Vcc1
R225
RL251
Q309
−46V
Q251
②
⑥
IC252
R257
C252

Fig. 3

DC component is present at output

↓

C252 becomes charged

↓

IC252 Pin ② voltage increases (Approx. 0.6V)

↓

IC252 Pin ⑥ goes high

↓

Q251 turns off

↓

RL251 opens

↓

Output is disconnected

NOTE: The above diagrams refer to "A" channel only. Operation of "B" channel DC Detection is the same.
Refer to schematic diagram for correct component reference numbers.

Temp. Detection Circuit

This circuit protects the output transistors and power transformer by disconnecting the output if they begin to overheat.

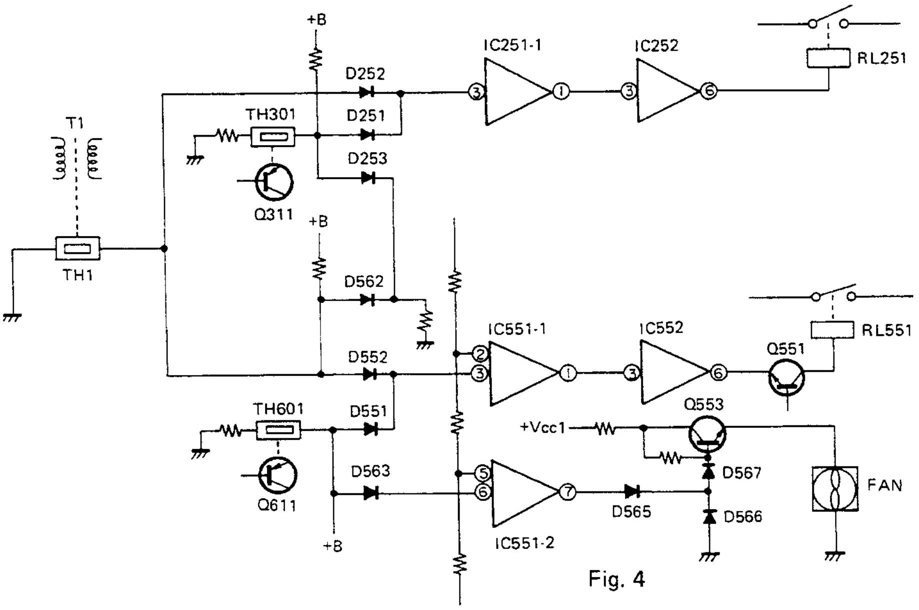
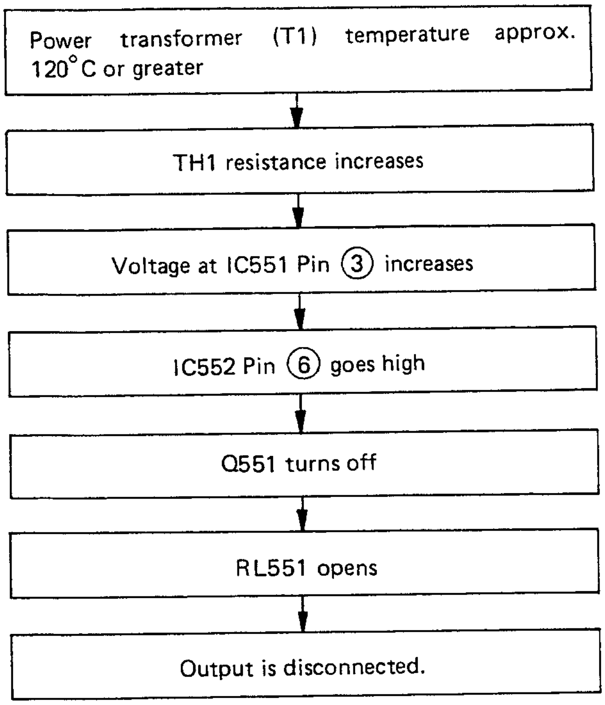
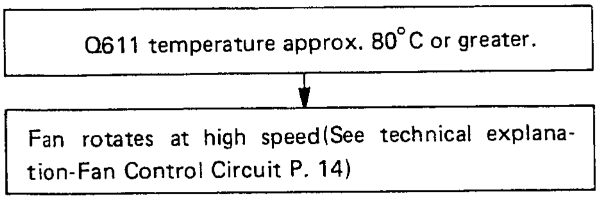
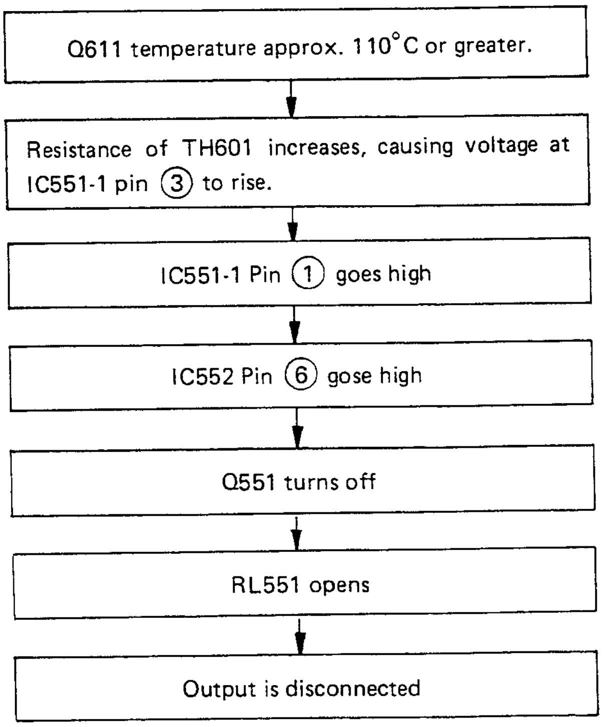

+B
IC251-1
IC252
D252
③
①
③
⑥
RL251
T1
TH301
D251
D253
Q311
+B
TH1
D562
RL551
IC551-1
IC552
Q551
D552
②
③
①
③
⑥
TH601
D551
Q553
+Vcc1
D567
FAN
D563
⑤
⑥
⑦
Q611
D565
D566
+B
IC551-2

Fig. 4


Power transformer (T1) temperature approx. 120°C or greater
TH1 resistance increases
Voltage at IC551 Pin ③ increases
IC552 Pin ⑥ goes high
Q551 turns off
RL551 opens
Output is disconnected.

The above diagram refers to "B" channel only.
TH1 also affects "A" channel.
Refer to schematic diagram for correct component reference numbers.


Q611 temperature approx. 80°C or greater.
Fan rotates at high speed(See technical explanation-Fan Control Circuit P. 14)


Q611 temperature approx. 110°C or greater.
Resistance of TH601 increases, causing voltage at IC551-1 pin ③ to rise.
IC551-1 Pin ① goes high
IC552 Pin ⑥ gose high
Q551 turns off
RL551 opens
Output is disconnected

NOTE: The above diagrams refer to "B" channel only. Operation of "A" channel Temp, Detection Circuit is the same. Refer to schematic diagram for correct component reference numbers.

ADJUSTMENT PROCEDURE

EQUIPMENT NEEDED : DIGITAL DC VOLTMETER

PREPARATION

1. Remove the upper cover. (Refer to "Disassembly")
2. Do not connect any audio signal to the INPUT TERMINAL.
3. Disconnect the speakers from the output terminals.
4. Then turn the power switch on and allow the amplifiers to warm up for a few minutes.

BIAS ADJUSTMENT

This adjustment must be performed when amplifier is cold.

1. Under no signal and no load condition, connect the ⊕ terminal of the digital DC voltmeter to TP301 and the ⊖ terminal to TP303 on the Power A Circuit Board.
2. Adjust VR102 on the Driver A Circuit Board so that the voltage becomes +13.5mV.

+9 mV

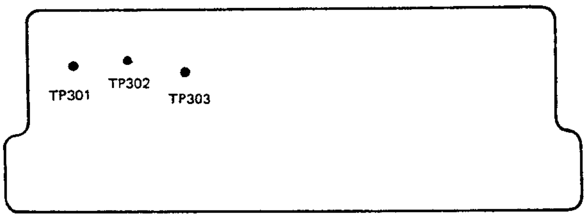
3. Repeat the adjustment on the Power B Circuit Board by connecting the ⊕ terminal of the DC voltmeter to TP601 and the ⊖ terminal to TP603. Adjust VR402 so that the voltage becomes +13.5mV.

DC OFFSET ADJUSTMENT

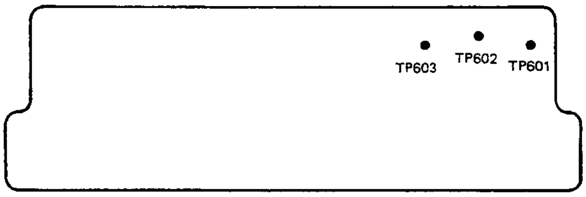
1. Connect the digital DC voltmeter between TP303 and TP302 on the Power A Circuit Board.
2. Adjust VR101 in the Driver A Circuit Board so that voltage becomes 0V.
3. Repeat the adjustment on the Power B Circuit Board by connecting the digital DC voltmeter between TP603 and TP602.
   Adjust VR401 on the Driver B Circuit Board so that voltage becomes 0V.

CHECK POINTS AND CONTROLS LOCATION (Components View)

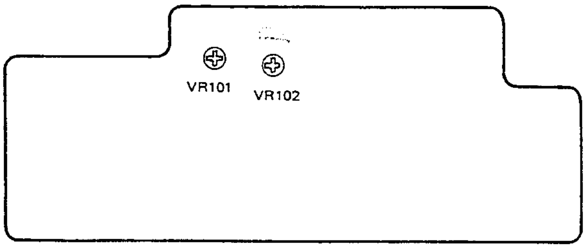
Power A Circuit Board



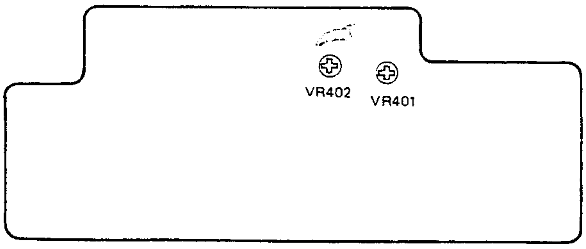
Power B Circuit Board



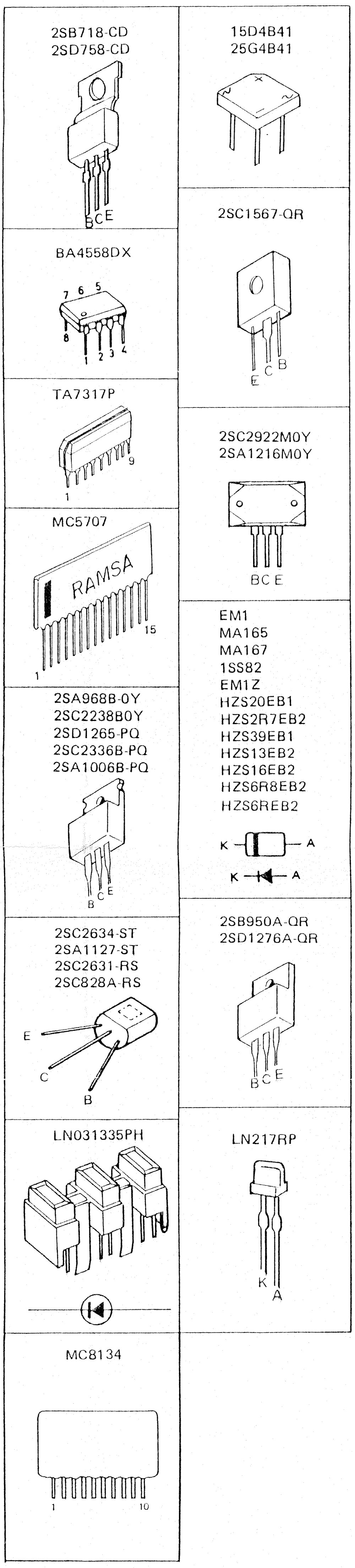
Driver A Circuit Board

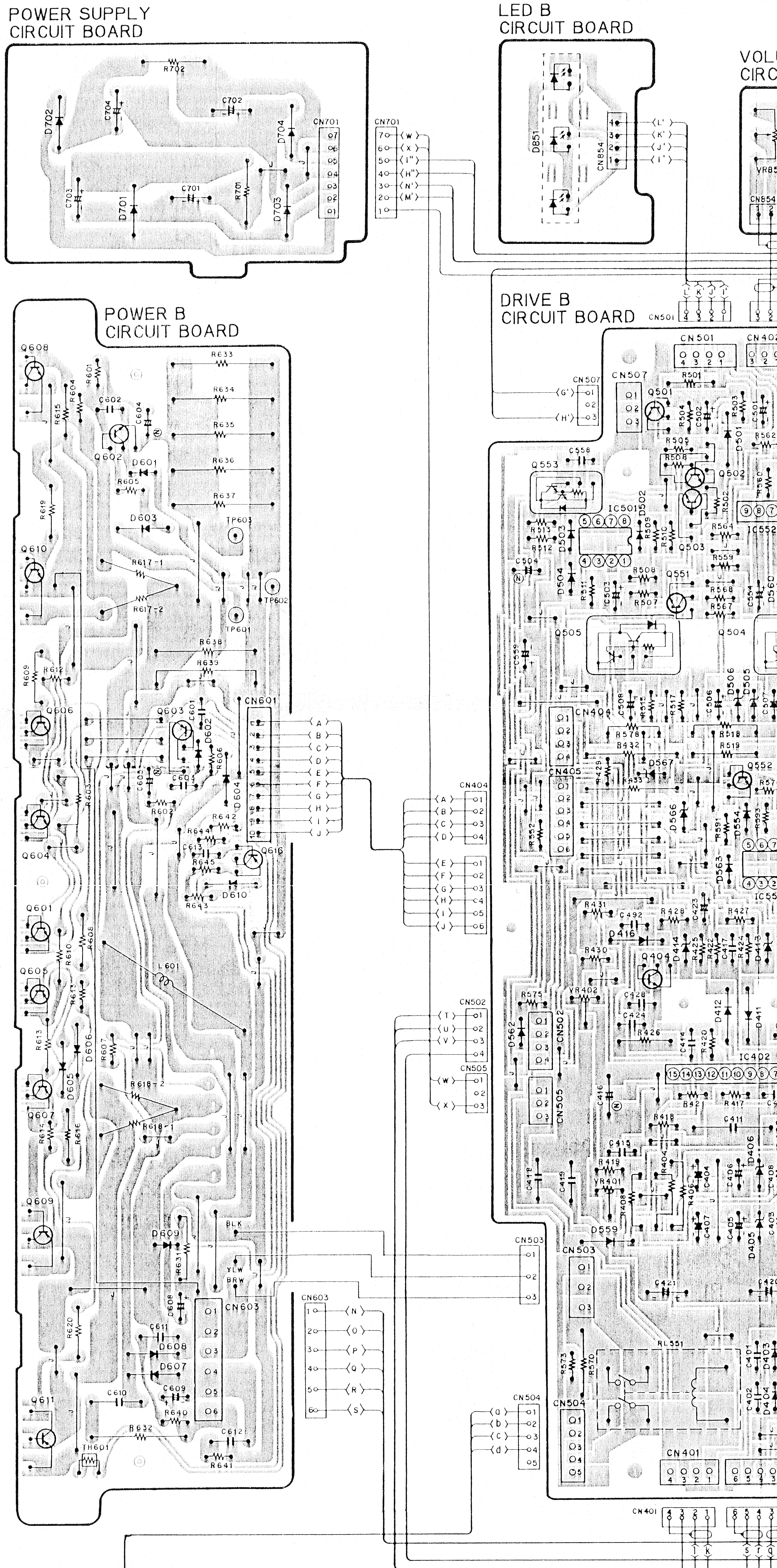


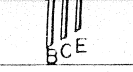
Driver B Circuit Board



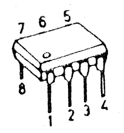
CIRCUIT BOARD AND


2SB718-CD
2SD758-CD
BCE
15D4B41
25G4B41
BA4558DX
2SC1567-QR
E C B
TA7317P
2SC2922M0Y
2SA1216M0Y
BC E
MC5707
RAMSA
EM1
MA165
MA167
1SS82
EM1Z
HZS20EB1
HZS2R7EB2
HZS39EB1
HZS13EB2
HZS16EB2
HZS6R8EB2
HZS6REB2
K
A
2SA968B-0Y
2SC2238B0Y
2SD1265-PQ
2SC2336B-PQ
2SA1006B-PQ
B C E
2SC2634-ST
2SA1127-ST
2SC2631-RS
2SC828A-RS
E
C
B
2SB950A-QR
2SD1276A-QR
B C E
LN031335PH
LN217RP
K
A
MC8134

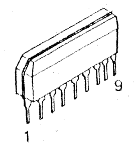

POWER SUPPLY
CIRCUIT BOARD
LED B
CIRCUIT BOARD
VOL
CIRC
POWER B
CIRCUIT BOARD
DRIVE B
CIRCUIT BOARD
CN701
CN854
D851
CN601
CN603
CN404
CN405
CN502
CN503
CN504
CN505
CN501
CN507
CN401
CN402
IC501
IC552
IC402
RL551
L601
TP601
TP602
TP603
BLK
YLW
BRW



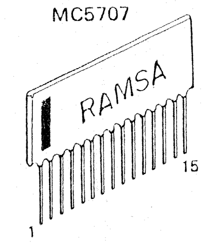
BA4558DX



TA7317P



MC5707



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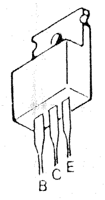
2SC2238B0Y
2SD1265-PQ
2SC2336B-PQ
2SA1006B-PQ



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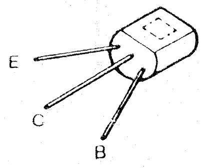
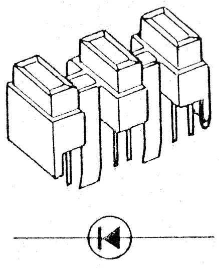
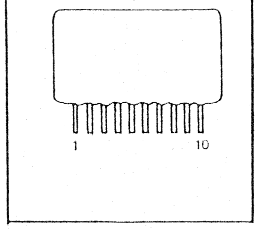
2SA1127-ST
2SC2631-RS
2SC828A-RS



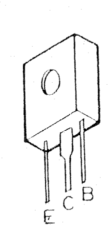
LN031335PH



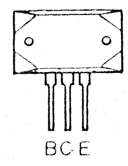
MC8134



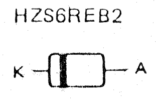
2SC1567-QR



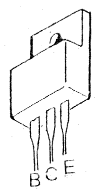
2SC2922M0Y
2SA1216M0Y



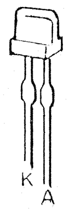
EM1
MA165
MA167
1SS82
EM1Z
HZS20EB1
HZS2R7EB2
HZS39EB1
HZS13EB2
HZS16EB2
HZS6R8EB2
HZS6REB2

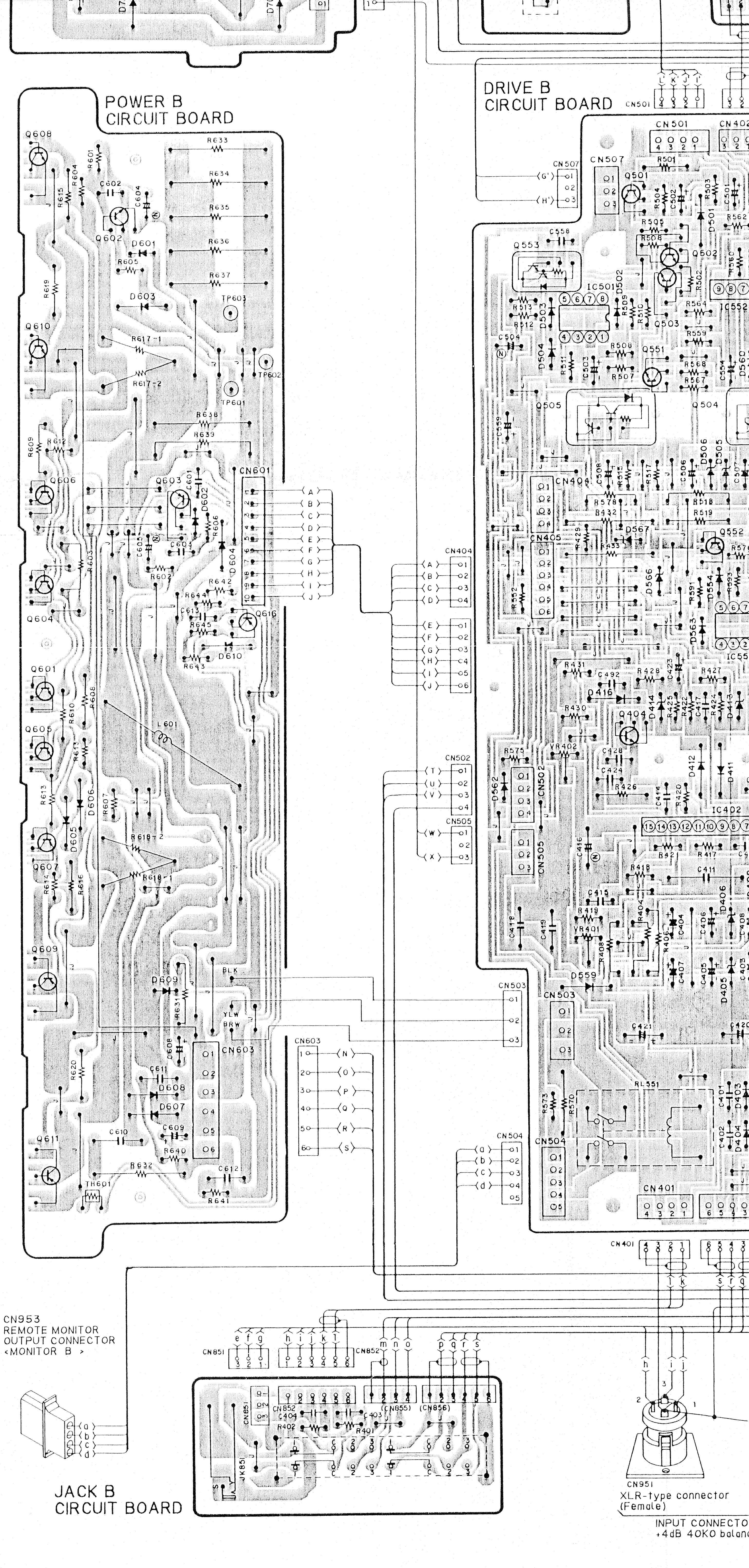


2SB950A-QR
2SD1276A-QR

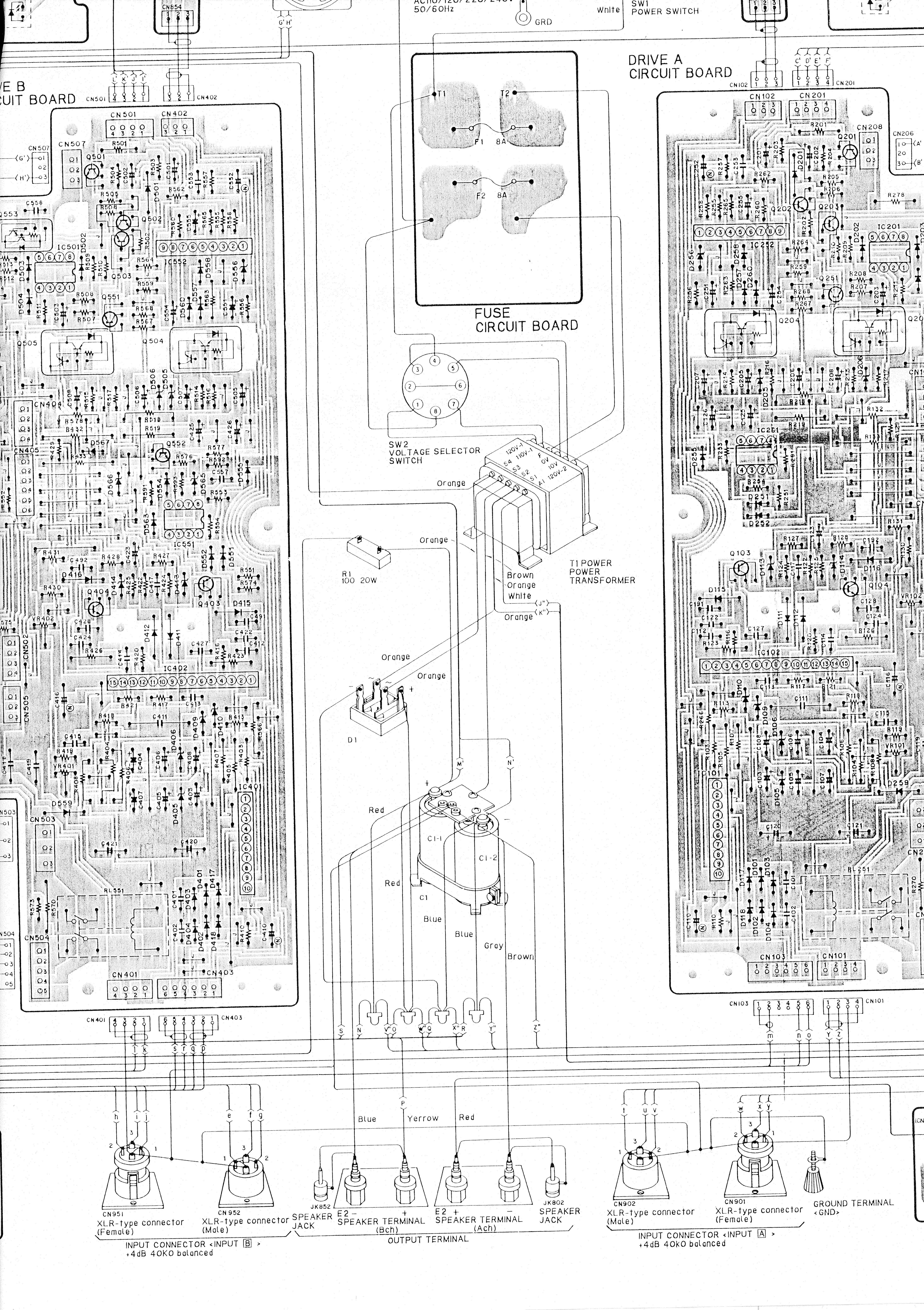


LN217RP

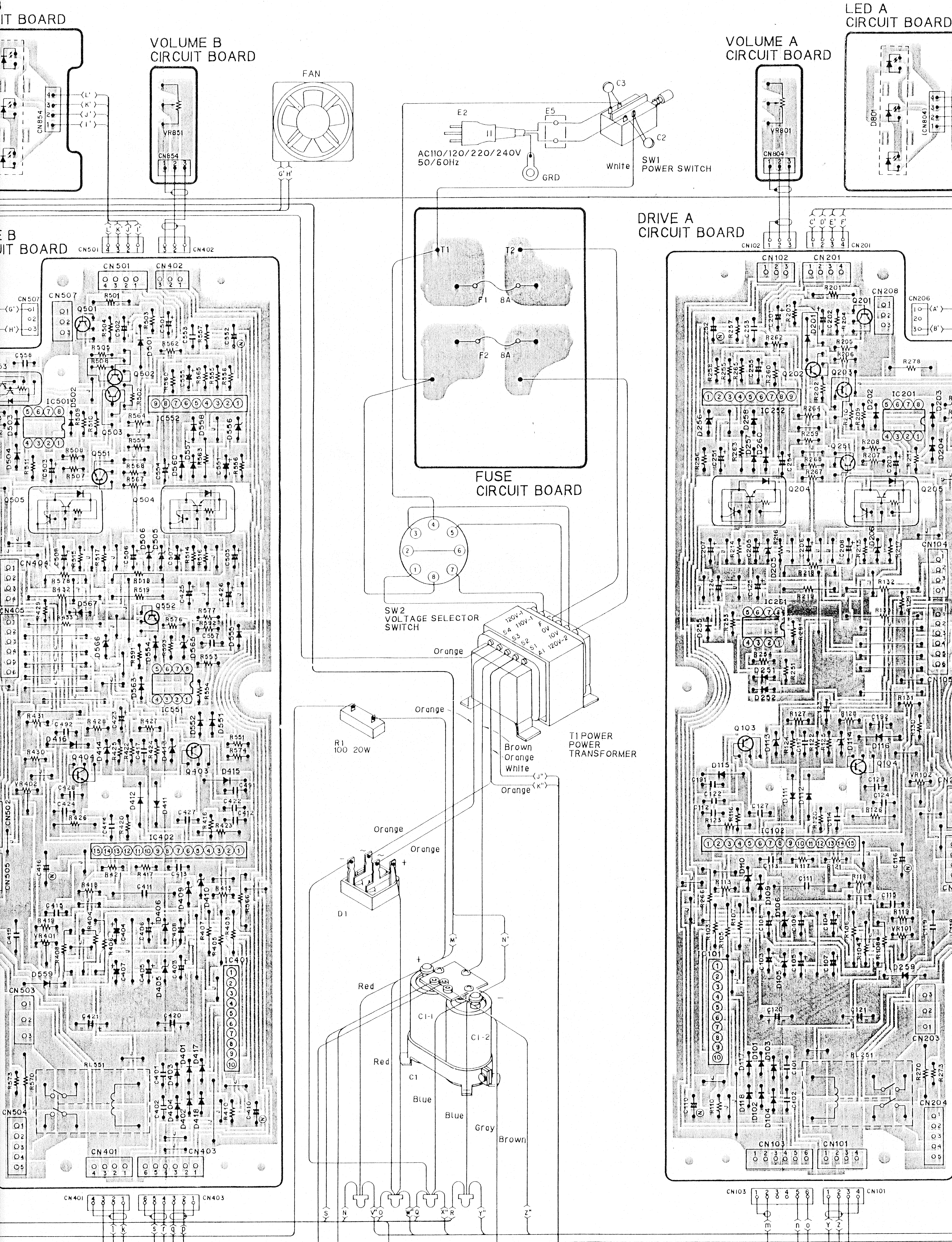



POWER B
CIRCUIT BOARD
DRIVE B
CIRCUIT BOARD
CN601
CN603
CN404
CN502
CN505
CN503
CN504
CN401
CN402
CN501
CN507
IC501
IC402
IC552
RL551
L601
TH601
TP601
TP602
TP603
BLK
YLW
BRW
CN953
REMOTE MONITOR
OUTPUT CONNECTOR
<MONITOR B>
CN851
CN852
(CN855)
(CN856)
JK851
JACK B
CIRCUIT BOARD
CN951
XLR-type connector
(Female)
INPUT CONNECTO
+4dB 40KΩ balanc

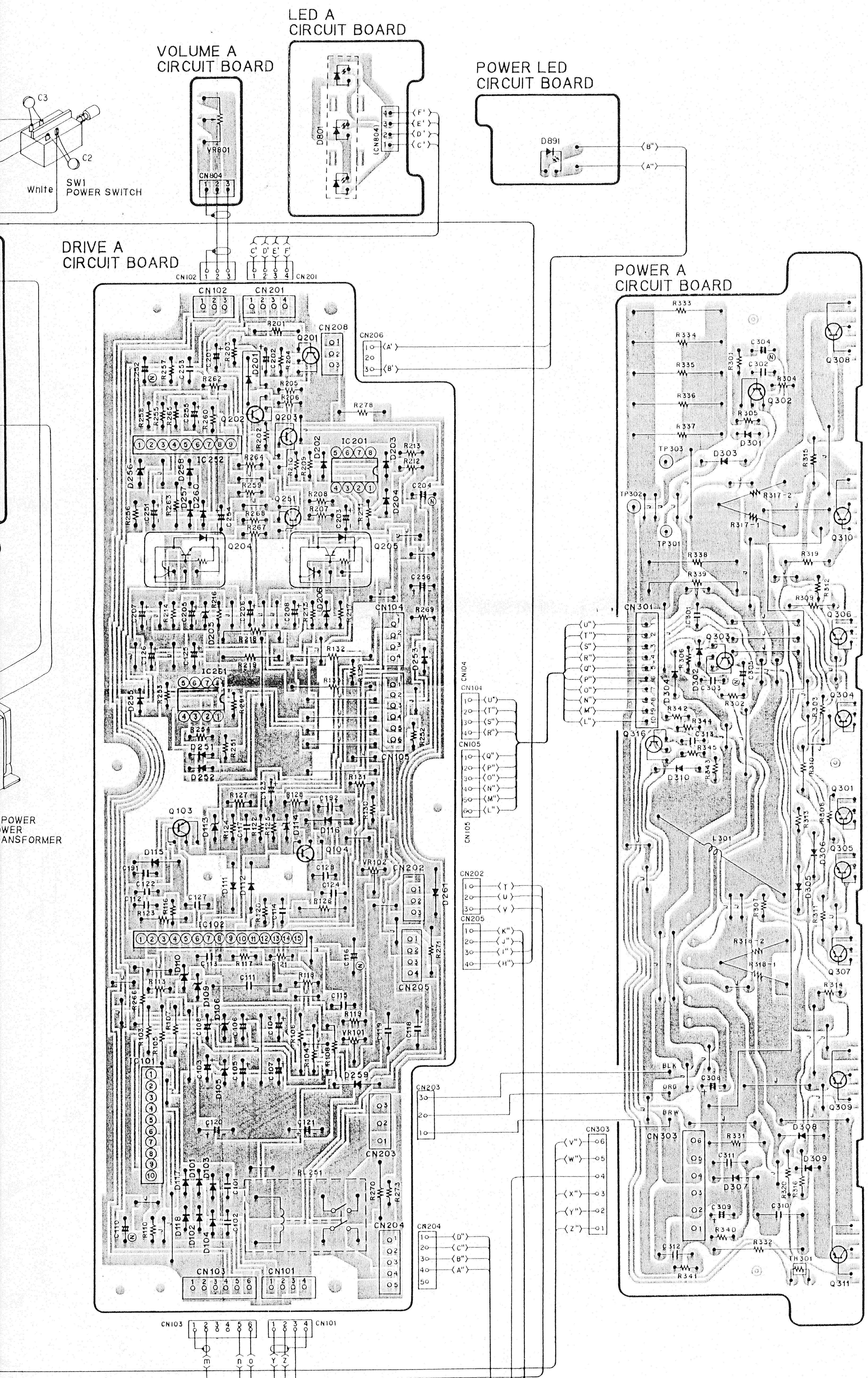
1

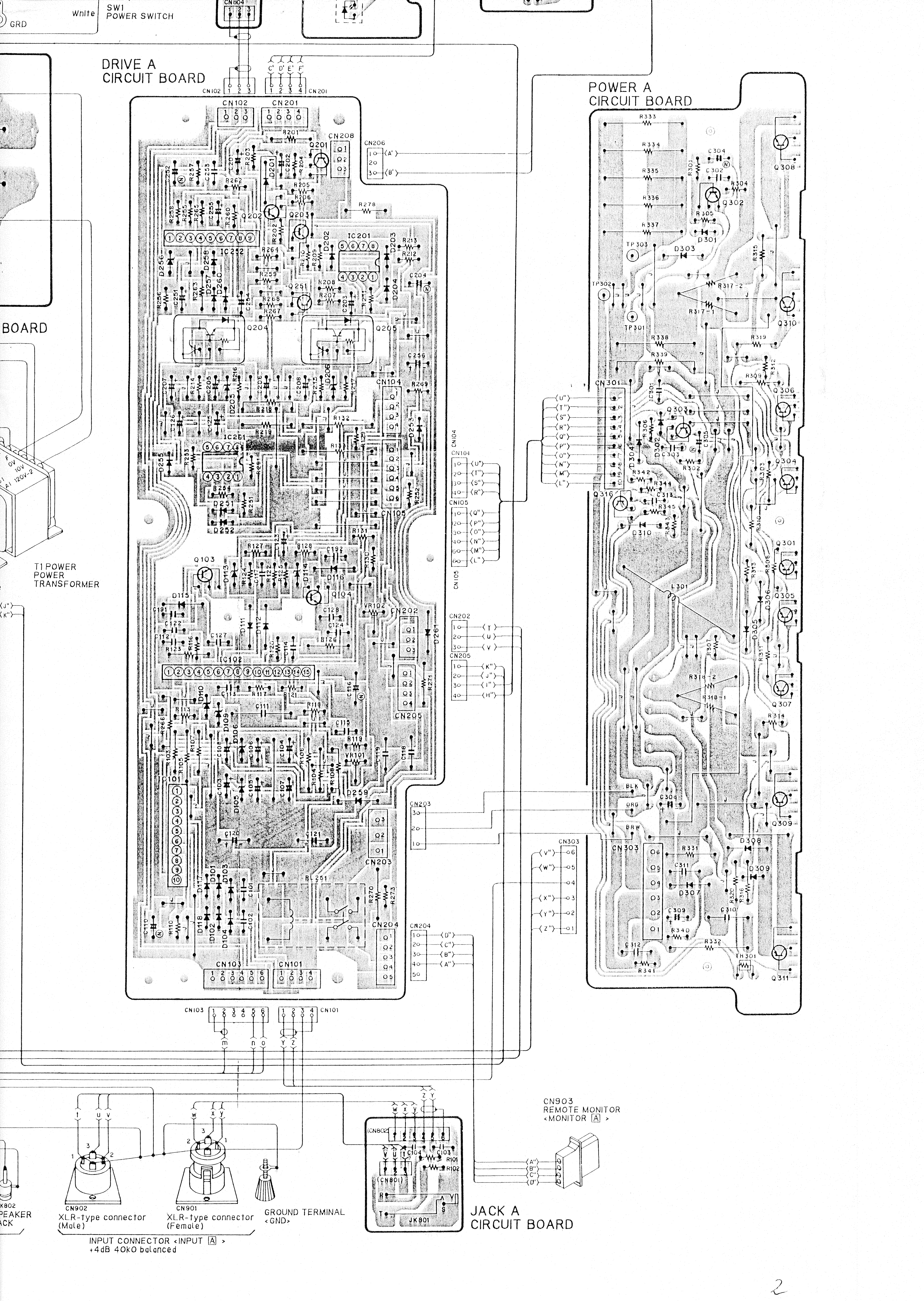

AC110/120/220/240V
50/60Hz
GRD
White
SW1
POWER SWITCH
CN854
G' H'
VE B
CUIT BOARD
CN501
CN402
DRIVE A
CIRCUIT BOARD
CN102
CN201
CN208
CN206
CN507
Q501
Q502
Q503
Q551
Q505
Q504
IC501
IC552
IC551
IC402
IC401
CN404
CN405
Q552
Q404
Q403
D567
VR402
CN502
CN505
VR401
D559
CN503
RL551
CN504
CN401
CN403
T1
T2
F1 8A
F2 8A
FUSE
CIRCUIT BOARD
SW2
VOLTAGE SELECTOR
SWITCH
120V-1
S4 110V-1
S3
S2
S1
A1
F
0V
10V
120V-2
Orange
T1 POWER
POWER
TRANSFORMER
R1
100 20W
Brown
Orange
White
(J")
(K")
D1
M'
N'
Red
C1-1
C1-2
C1
Blue
Gray
Brown
Q201
Q202
Q203
Q204
Q251
IC252
IC201
IC251
IC102
IC101
Q103
Q104
VR102
VR101
RL251
CN103
CN101
S N V" O W" Q X" R Y" Z"
h i j
e f g
u v
w x y
m n o Y Z
P
Blue
Yerrow
Red
CN951
XLR-type connector
(Female)
CN 952
XLR-type connector
(Male)
INPUT CONNECTOR <INPUT B>
+4dB 40KΩ balanced
JK852
SPEAKER
JACK
E2 −
SPEAKER TERMINAL
(Bch)
E2 +
SPEAKER TERMINAL
(Ach)
JK802
SPEAKER
JACK
OUTPUT TERMINAL
CN902
XLR-type connector
(Male)
CN901
XLR-type connector
(Female)
GROUND TERMINAL
<GND>
INPUT CONNECTOR <INPUT A>
+4dB 40KΩ balanced

CUIT BOARD AND WIRING CONNECTION DIAGRAM OF WP-9110E


IT BOARD
VOLUME B
CIRCUIT BOARD
VR851
CN854
FAN
E2
E5
C3
C2
AC110/120/220/240V
50/60Hz
GRD
White
SW1
POWER SWITCH
VOLUME A
CIRCUIT BOARD
VR801
CN804
LED A
CIRCUIT BOARD
D801
E B
IT BOARD
CN501
CN402
DRIVE A
CIRCUIT BOARD
CN102
CN201
FUSE
CIRCUIT BOARD
T1
T2
F1
8A
F2
8A
SW2
VOLTAGE SELECTOR
SWITCH
120V-1
110V-1
S4
S3
S2
S1
A1
F
0V
10V
120V-2
T1 POWER
POWER
TRANSFORMER
Orange
Brown
White
R1
100 20W
D1
Red
C1-1
C1-2
C1
Blue
Gray
IC402
IC552
IC551
IC501
IC401
RL551
CN401
CN403
CN503
CN504
CN502
CN505
CN404
CN405
CN507
IC201
IC252
IC251
IC102
RL251
CN103
CN101
CN203
CN204
CN208
CN206
CN104
CN105
Q501
Q502
Q503
Q504
Q505
Q551
Q552
Q403
Q404
Q201
Q202
Q203
Q204
Q205
Q251
Q103
Q104
VR401
VR402
VR101
VR102

WP-9110E

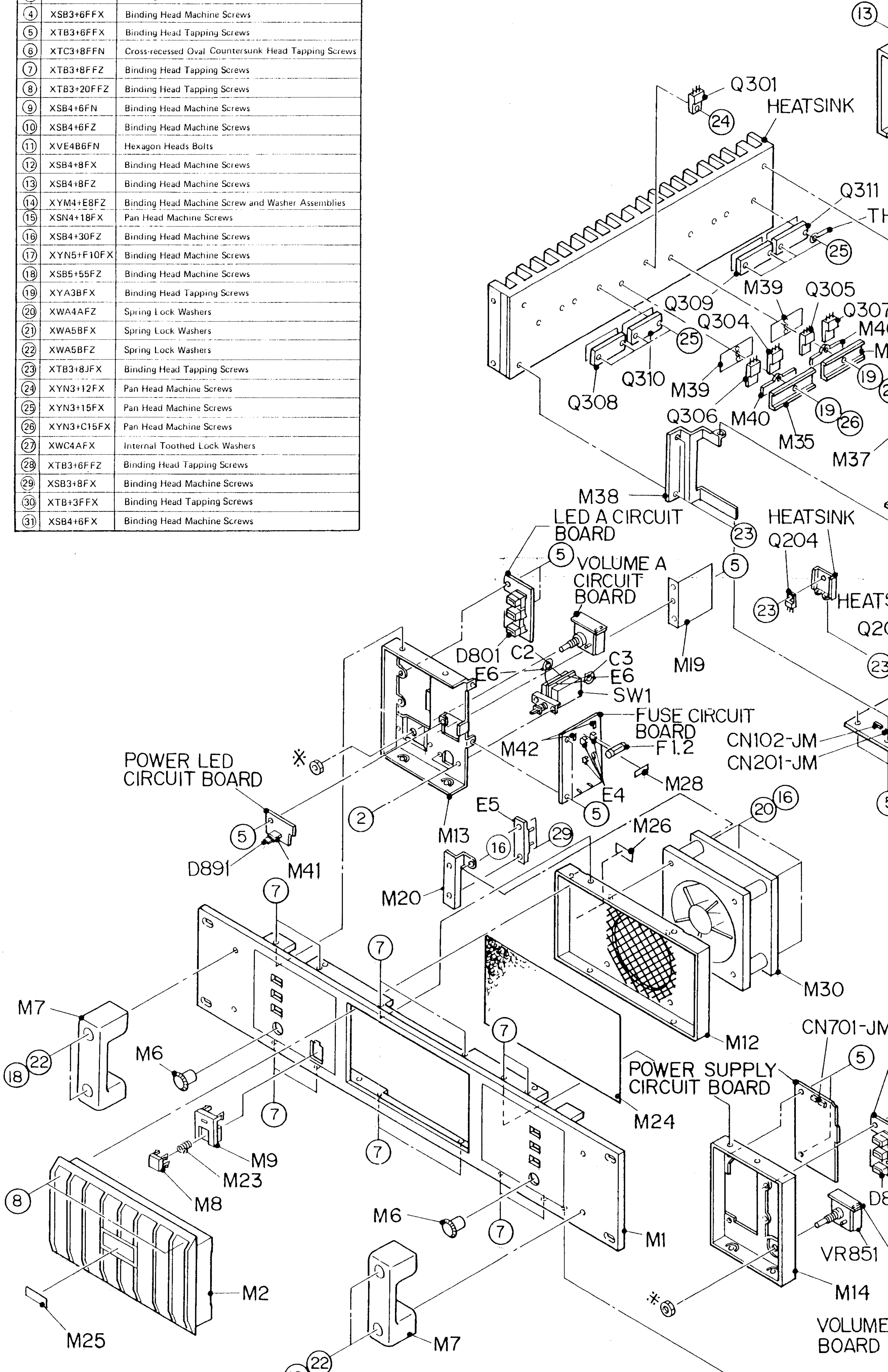

LED A
CIRCUIT BOARD
VOLUME A
CIRCUIT BOARD
POWER LED
CIRCUIT BOARD
C3
C2
White
SW1
POWER SWITCH
VR801
CN804
D801
(CN804)
(F')
(E')
(D')
(C')
D891
(B")
(A")
DRIVE A
CIRCUIT BOARD
CN102
CN201
C' D' E' F'
CN208
CN206
(A')
(B')
POWER A
CIRCUIT BOARD
Q201
Q202
Q203
Q204
Q205
Q251
IC201
IC252
IC251
IC102
IC101
CN104
CN105
CN202
CN203
CN204
CN205
CN103
CN101
Q103
Q104
VR101
VR102
RL251
(U")
(T")
(S")
(R")
(Q")
(P")
(O")
(N")
(M")
(L")
(T)
(U)
(V)
(K")
(J")
(I")
(H")
(D")
(C")
(B")
(A")
CN303
(V")
(W")
(X")
(Y")
(Z")
CN301
TP301
TP302
TP303
Q301
Q302
Q303
Q304
Q305
Q306
Q307
Q308
Q309
Q310
Q311
Q316
L301
TH301
BLK
ORG
BRW
POWER
WER
ANSFORMER
m
n
o
Y
Z


GRD
White
SW1
POWER SWITCH
CN804
DRIVE A
CIRCUIT BOARD
CN102
CN201
C' D' E' F'
POWER A
CIRCUIT BOARD
CN206
CN208
(A')
(B')
IC201
IC252
IC251
IC102
Q201
Q202
Q203
Q204
Q205
Q251
Q103
Q104
CN104
CN105
CN202
CN205
CN203
CN204
CN103
CN101
RL251
VR101
VR102
BOARD
T1 POWER
POWER
TRANSFORMER
0V
10V
120V-2
(J")
(K")
(U") (T") (S") (R")
(Q") (P") (O") (N") (M") (L")
(T) (U) (V)
(K") (J") (I") (H")
(D") (C") (B") (A")
CN301
CN303
Q301
Q302
Q303
Q304
Q305
Q306
Q307
Q308
Q309
Q310
Q311
Q316
L301
TP301
TP302
TP303
TH301
R317-1
R317-2
R318-1
R318-2
BLK
ORG
BRW
(V") (W") (X") (Y") (Z")
m
n
o
Y Z
t u v
w x y
CN902
XLR-type connector
(Male)
CN901
XLR-type connector
(Female)
GROUND TERMINAL
<GND>
INPUT CONNECTOR <INPUT A>
+4dB 40kΩ balanced
K802
PEAKER
ACK
CN802
CN801
C104
C103
R101
R102
JK801
JACK A
CIRCUIT BOARD
CN903
REMOTE MONITOR
<MONITOR A>
(A") (B") (C") (D")

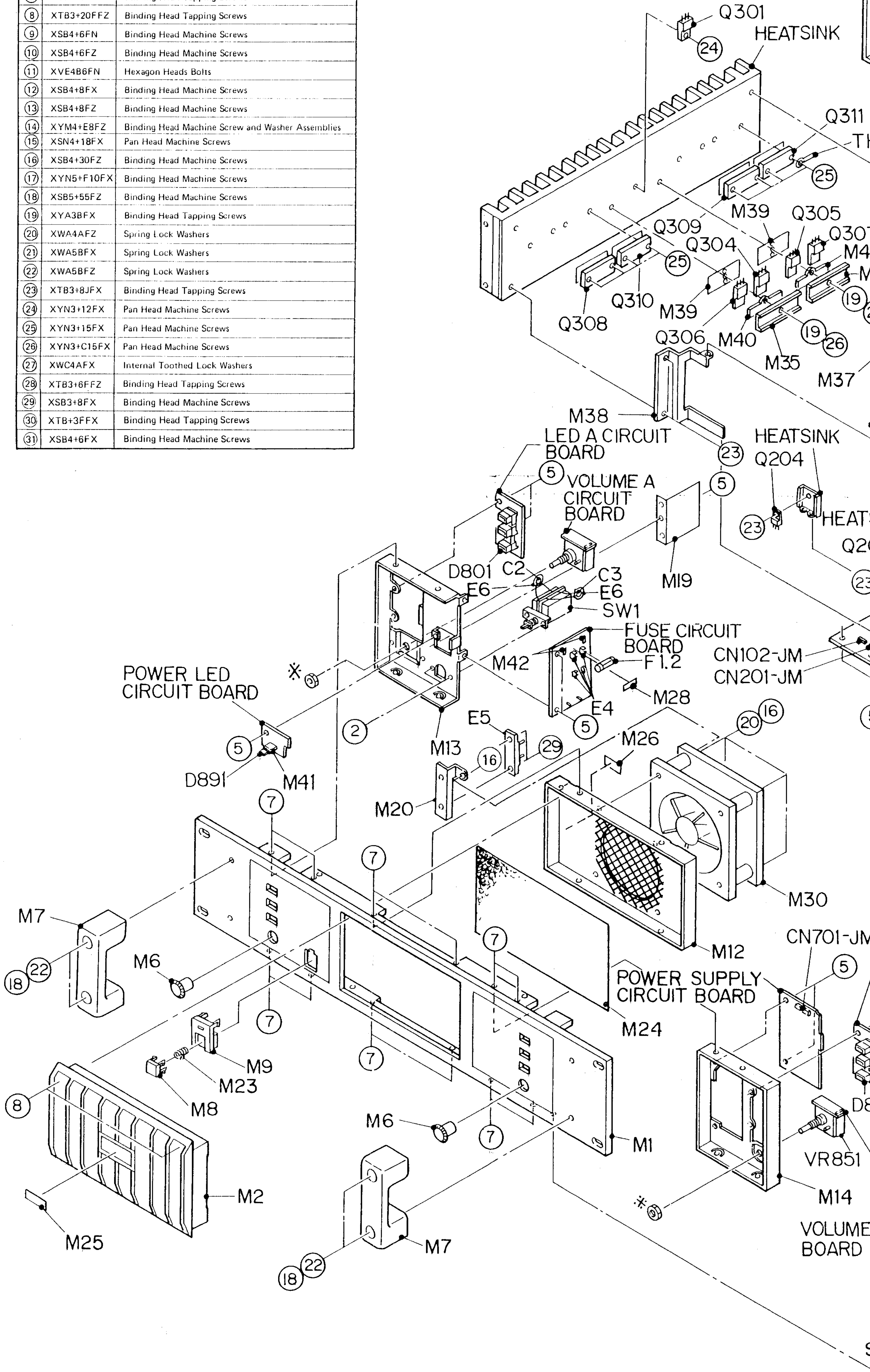
EXPL

○ Numbers Show Screws, Bolts and Washers.

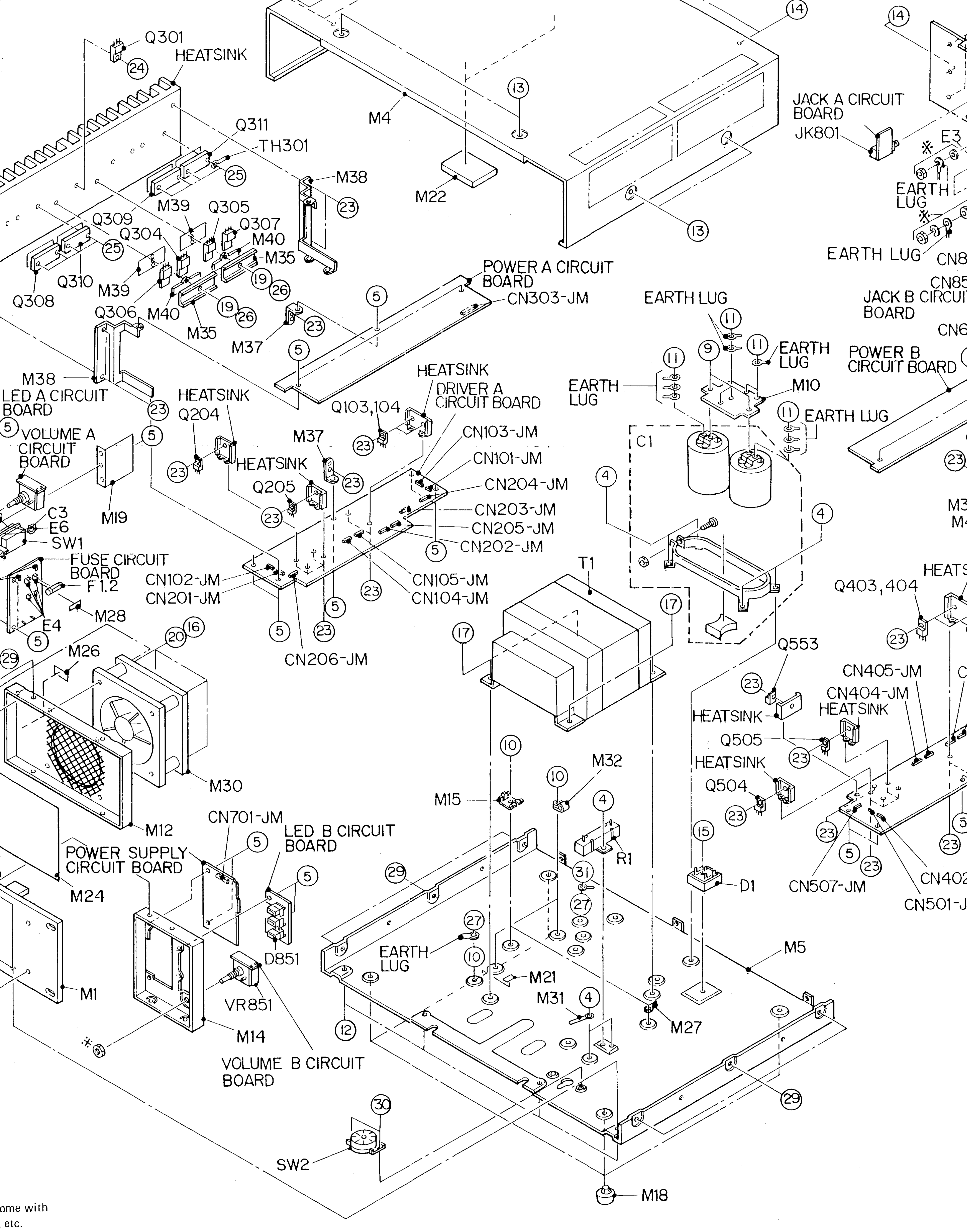
No.	Screws	Discriptions
①	XSB2.6+4FX	Binding Head Machine Screws
②	XSB3+6FX	Binding Head Machine Screws
③	XSB3+6FZ	Binding Head Machine Screws
④	XSB3+6FFX	Binding Head Machine Screws
⑤	XTB3+6FFX	Binding Head Tapping Screws
⑥	XTC3+8FFN	Cross-recessed Oval Countersunk Head Tapping Screws
⑦	XTB3+8FFZ	Binding Head Tapping Screws
⑧	XTB3+20FFZ	Binding Head Tapping Screws
⑨	XSB4+6FN	Binding Head Machine Screws
⑩	XSB4+6FZ	Binding Head Machine Screws
⑪	XVE4B6FN	Hexagon Heads Bolts
⑫	XSB4+8FX	Binding Head Machine Screws
⑬	XSB4+8FZ	Binding Head Machine Screws
⑭	XYM4+E8FZ	Binding Head Machine Screw and Washer Assemblies
⑮	XSN4+18FX	Pan Head Machine Screws
⑯	XSB4+30FZ	Binding Head Machine Screws
⑰	XYN5+F10FX	Binding Head Machine Screws
⑱	XSB5+55FZ	Binding Head Machine Screws
⑲	XYA3BFX	Binding Head Tapping Screws
⑳	XWA4AFZ	Spring Lock Washers
㉑	XWA5BFX	Spring Lock Washers
㉒	XWA5BFZ	Spring Lock Washers
㉓	XTB3+8JFX	Binding Head Tapping Screws
㉔	XYN3+12FX	Pan Head Machine Screws
㉕	XYN3+15FX	Pan Head Machine Screws
㉖	XYN3+C15FX	Pan Head Machine Screws
㉗	XWC4AFX	Internal Toothed Lock Washers
㉘	XTB3+6FFZ	Binding Head Tapping Screws
㉙	XSB3+8FX	Binding Head Machine Screws
㉚	XTB+3FFX	Binding Head Tapping Screws
㉛	XSB4+6FX	Binding Head Machine Screws


⑬
Q301
㉔
HEATSINK
Q311
TH
㉕
M39
Q305
Q307
Q309
Q304
M4
M
㉕
⑲
Q310
M39
Q308
Q306
M40
⑲
㉖
M35
M37
M38
LED A CIRCUIT BOARD
㉓
HEATSINK
Q204
⑤
VOLUME A CIRCUIT BOARD
⑤
㉓
HEATS
Q20
D801
C2
C3
E6
E6
M19
㉓
SW1
FUSE CIRCUIT BOARD
F1.2
M42
CN102-JM
CN201-JM
POWER LED CIRCUIT BOARD
※
M28
E4
⑤
⑳
⑯
②
E5
M26
⑤
M13
㉙
⑯
D891
M41
M20
⑦
⑦
M30
M7
⑦
M12
CN701-JM
㉒
⑱
M6
POWER SUPPLY CIRCUIT BOARD
⑤
⑦
M24
M9
⑦
M23
M8
⑧
M6
D8
⑦
M1
VR851
M2
M14
※
M25
M7
VOLUME
BOARD
㉒

⑥	XTC3+8FFN	Cross-recessed Oval Countersunk Head Tapping Screws
⑦	XTB3+8FFZ	Binding Head Tapping Screws
⑧	XTB3+20FFZ	Binding Head Tapping Screws
⑨	XSB4+6FN	Binding Head Machine Screws
⑩	XSB4+6FZ	Binding Head Machine Screws
⑪	XVE4B6FN	Hexagon Heads Bolts
⑫	XSB4+8FX	Binding Head Machine Screws
⑬	XSB4+8FZ	Binding Head Machine Screws
⑭	XYM4+E8FZ	Binding Head Machine Screw and Washer Assemblies
⑮	XSN4+18FX	Pan Head Machine Screws
⑯	XSB4+30FZ	Binding Head Machine Screws
⑰	XYN5+F10FX	Binding Head Machine Screws
⑱	XSB5+55FZ	Binding Head Machine Screws
⑲	XYA3BFX	Binding Head Tapping Screws
⑳	XWA4AFZ	Spring Lock Washers
㉑	XWA5BFX	Spring Lock Washers
㉒	XWA5BFZ	Spring Lock Washers
㉓	XTB3+8JFX	Binding Head Tapping Screws
㉔	XYN3+12FX	Pan Head Machine Screws
㉕	XYN3+15FX	Pan Head Machine Screws
㉖	XYN3+C15FX	Pan Head Machine Screws
㉗	XWC4AFX	Internal Toothed Lock Washers
㉘	XTB3+6FFZ	Binding Head Tapping Screws
㉙	XSB3+8FX	Binding Head Machine Screws
㉚	XTB+3FFX	Binding Head Tapping Screws
㉛	XSB4+6FX	Binding Head Machine Screws


Q301
㉔
HEATSINK
Q311
TH
㉕
M39
Q305
Q307
M4
M
Q309
Q304
㉕
Q310
M39
Q308
⑲
Q306
M40
⑲㉖
M35
M37
M38
LED A CIRCUIT BOARD
㉓
HEATSINK
Q204
⑤
VOLUME A CIRCUIT BOARD
⑤
㉓
HEATS
Q2
M19
D801
C2
C3
E6
E6
SW1
FUSE CIRCUIT BOARD
M42
F1.2
CN102-JM
CN201-JM
※
POWER LED CIRCUIT BOARD
M28
E4
⑤
②
M13
E5
㉙
M26
⑳⑯
⑤
D891
M41
⑯
M20
⑦
⑦
M30
M7
⑦
㉒
⑱
M6
M12
CN701-JM
POWER SUPPLY CIRCUIT BOARD
⑤
⑦
M24
M9
⑦
M23
⑧
M8
M6
⑦
D8
M1
VR851
M2
※
M14
M25
VOLUME BOARD
M7
㉒
⑱
S

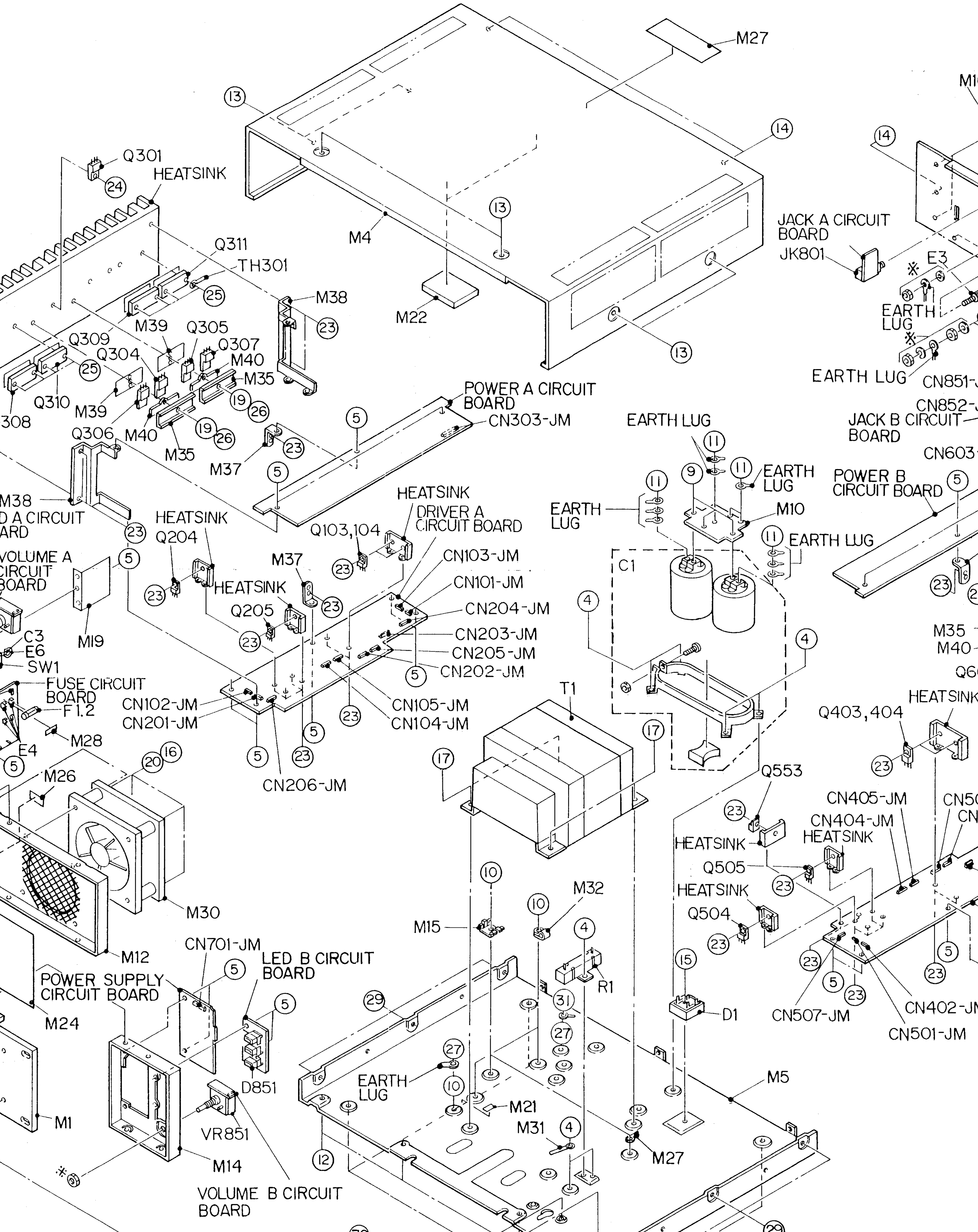
※ These nuts and washers come with respective jack, terminals, etc.

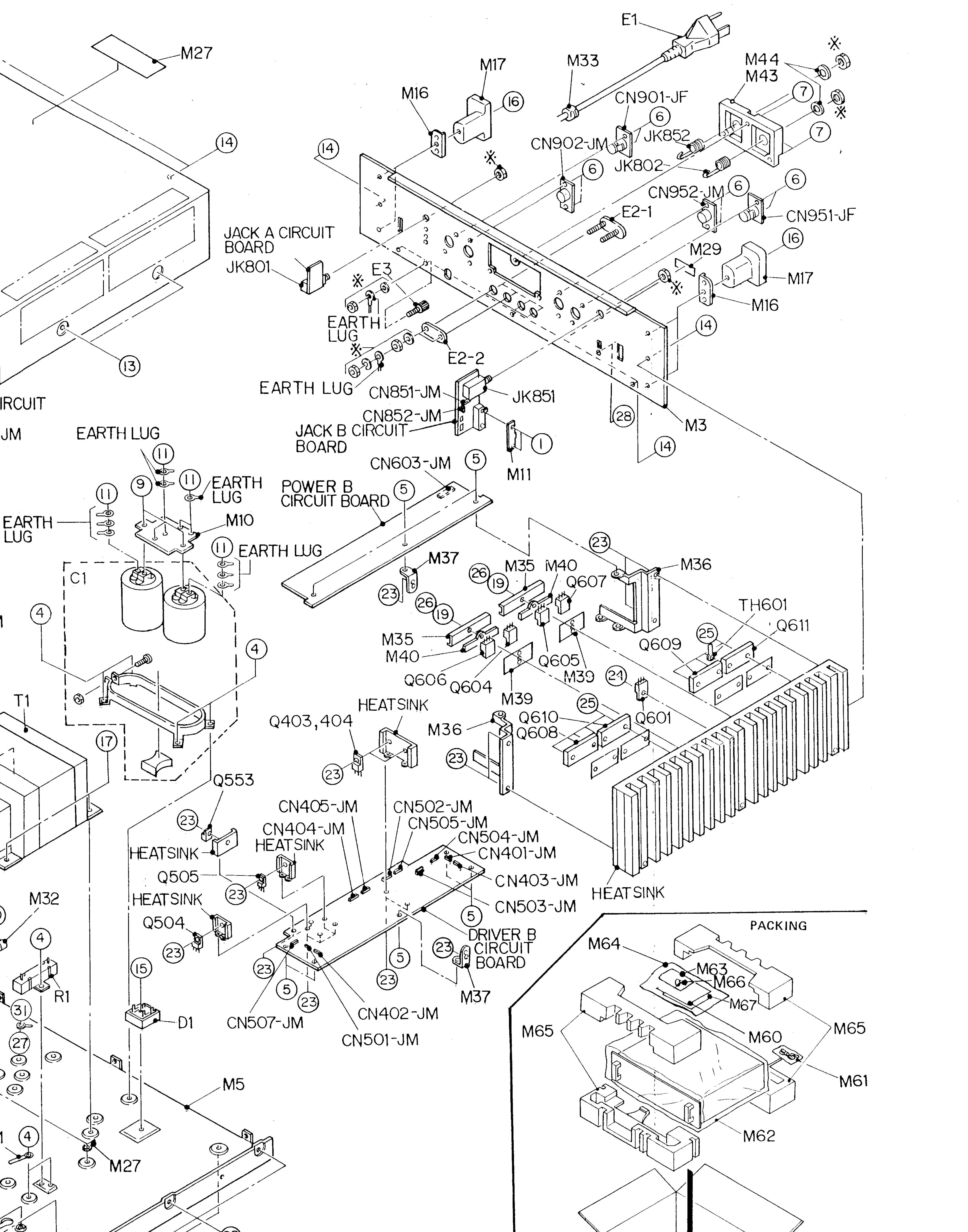

Q301
24
HEATSINK
14
14
M4
13
JACK A CIRCUIT BOARD
JK801
E3
Q311
TH301
25
M38
23
M22
13
EARTH LUG
EARTH LUG
M39
Q305
Q307
Q309
Q304
M40
M35
25
Q310
M39
19
26
Q308
Q306
M40
M35
19
26
POWER A CIRCUIT BOARD
CN303-JM
5
23
M37
5
EARTH LUG
11
9
11
EARTH LUG
JACK B CIRCUIT BOARD
POWER B CIRCUIT BOARD
M38
LED A CIRCUIT BOARD
23
HEATSINK
Q204
5
VOLUME A CIRCUIT BOARD
5
M19
HEATSINK
DRIVER A CIRCUIT BOARD
Q103,104
M37
23
CN103-JM
CN101-JM
CN204-JM
CN203-JM
CN205-JM
CN202-JM
HEATSINK
Q205
23
23
23
EARTH LUG
11
M10
11
EARTH LUG
C1
4
4
C3
E6
SW1
FUSE CIRCUIT BOARD
F1.2
E4
M28
5
CN102-JM
CN201-JM
CN105-JM
CN104-JM
CN206-JM
5
5
23
23
T1
17
17
HEATS
Q403,404
23
M26
29
20
16
Q553
23
HEATSINK
CN405-JM
CN404-JM
HEATSINK
Q505
23
HEATSINK
Q504
23
M30
M12
10
M15
10
M32
4
R1
15
D1
CN701-JM
LED B CIRCUIT BOARD
POWER SUPPLY CIRCUIT BOARD
5
5
M24
29
31
27
27
EARTH LUG
10
M21
D851
M1
VR851
M14
M31
4
M27
12
M5
CN507-JM
CN402
CN501-J
23
5
23
23
VOLUME B CIRCUIT BOARD
29
30
SW2
M18

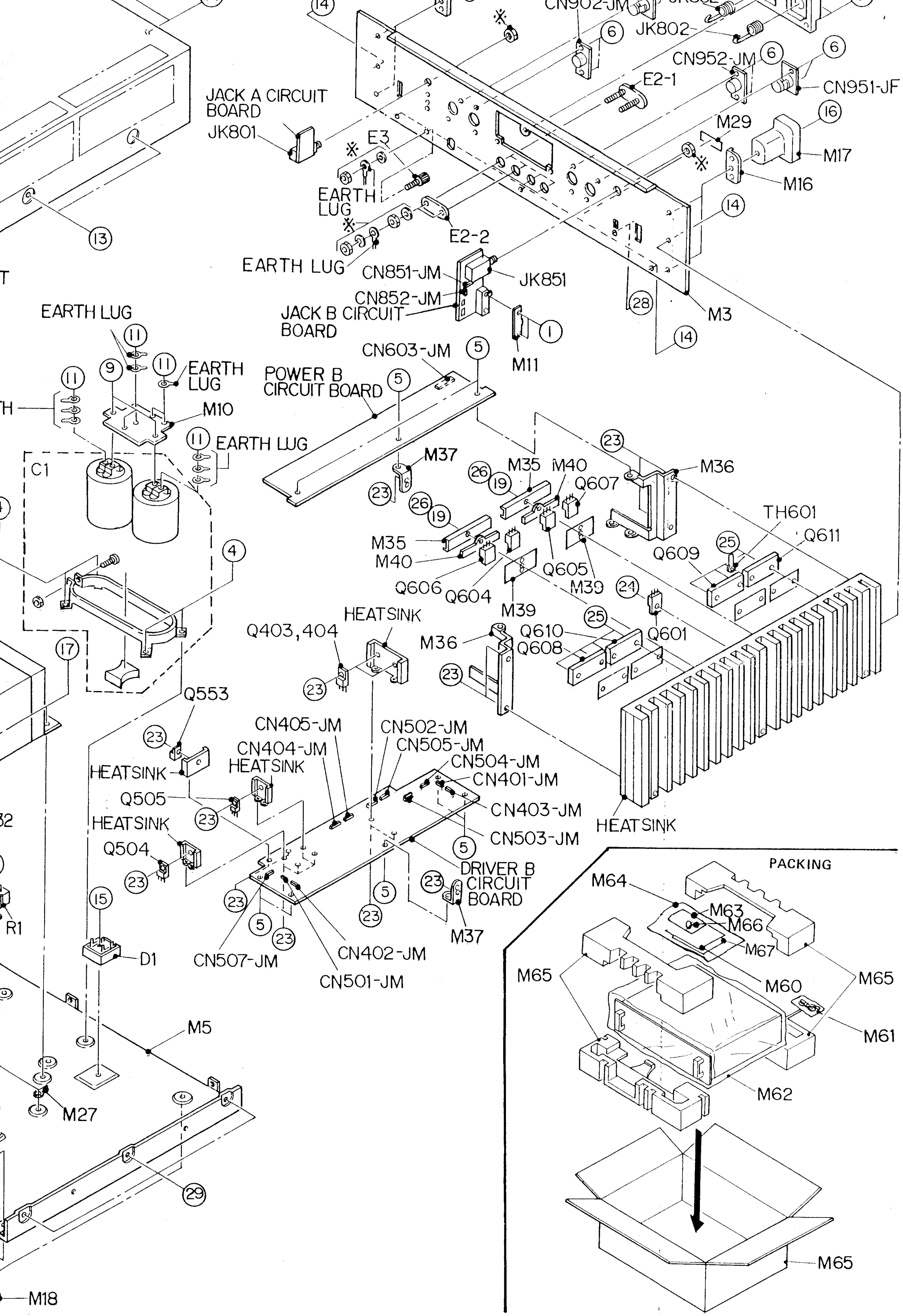
ome with

, etc.

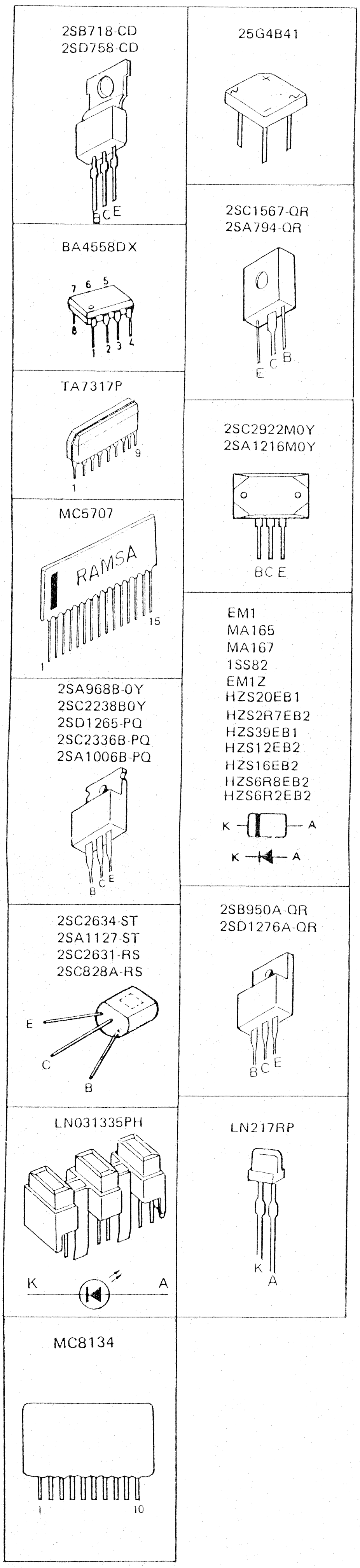
EXPLODED VIEW/PACKING OF WP-9110E


M27
M1
⑬
⑭
⑭
Q301
㉔
HEATSINK
⑬
M4
Q311
TH301
㉕
M38
㉓
M22
JACK A CIRCUIT
BOARD
JK801
E3
EARTH
LUG
⑬
Q309
M39
Q305
Q307
Q304
M40
㉕
M35
⑲
㉖
Q310
M39
308
Q306
M40
⑲
㉖
M35
M37
㉓
⑤
POWER A CIRCUIT
BOARD
CN303-JM
⑤
EARTH LUG
CN851-J
CN852-J
JACK B CIRCUIT
BOARD
CN603-
EARTH LUG
⑪
⑨
⑪
EARTH
LUG
POWER B
CIRCUIT BOARD
⑤
M38
D A CIRCUIT
ARD
㉓
⑤
VOLUME A
CIRCUIT
BOARD
M19
HEATSINK
Q204
㉓
HEATSINK
Q205
㉓
M37
㉓
Q103,104
㉓
HEATSINK
DRIVER A
CIRCUIT BOARD
CN103-JM
CN101-JM
CN204-JM
CN203-JM
CN205-JM
CN202-JM
⑤
CN105-JM
CN104-JM
㉓
CN102-JM
CN201-JM
⑤
⑤
㉓
CN206-JM
EARTH
LUG
⑪
M10
⑪
EARTH LUG
C1
④
④
㉓
M35
M40
Q6
HEATSINK
Q403,404
㉓
C3
E6
SW1
FUSE CIRCUIT
BOARD
F1.2
M28
E4
⑤
M26
⑳
⑯
M30
M12
M24
T1
⑰
⑰
Q553
㉓
HEATSINK
Q505
CN405-JM
CN404-JM
HEATSINK
CN5
CN
㉓
HEATSINK
Q504
㉓
⑩
M15
⑩
M32
④
R1
⑮
D1
㉓
⑤
㉓
⑤
㉓
CN507-JM
CN402-JN
CN501-JM
㉓
POWER SUPPLY
CIRCUIT BOARD
CN701-JM
⑤
LED B CIRCUIT
BOARD
⑤
D851
㉙
㉛
㉗
㉗
EARTH
LUG
⑩
M21
M31
④
M27
M5
M1
VR851
M14
※
⑫
VOLUME B CIRCUIT
BOARD
㉙


M27
14
13
IRCUIT
JM
E1
M33
M17
16
M16
14
※
M44
M43
※
7
7
※
CN901-JF
6
CN902-JM
JK852
JK802
6
CN952-JM
6
6
CN951-JF
E2-1
16
M29
M17
M16
※
14
JACK A CIRCUIT BOARD
JK801
※
E3
EARTH LUG
※
E2-2
EARTH LUG
CN851-JM
JK851
CN852-JM
JACK B CIRCUIT BOARD
1
M11
28
M3
14
EARTH LUG
11
9
11
EARTH LUG
M10
11
EARTH LUG
11
EARTH LUG
C1
4
4
T1
17
POWER B CIRCUIT BOARD
CN603-JM
5
5
M37
23
M36
23
M35
M40
Q607
26
19
26
19
M35
M40
Q606
Q604
Q605
M39
M39
Q609
25
TH601
Q611
24
Q601
25
Q610
Q608
M36
23
Q403,404
HEATSINK
23
Q553
23
HEATSINK
CN405-JM
CN404-JM
HEATSINK
Q505
23
CN502-JM
CN505-JM
CN504-JM
CN401-JM
CN403-JM
CN503-JM
5
HEATSINK
HEATSINK
Q504
23
M32
4
R1
31
27
15
D1
23
5
23
CN507-JM
CN402-JM
CN501-JM
5
23
23
DRIVER B CIRCUIT BOARD
M37
M5
4
M27
PACKING
M64
M63
M66
M67
M60
M65
M65
M61
M62


14
CN902-JM
JK802
6
CN952-JM
6
6
E2-1
CN951-JF
JACK A CIRCUIT BOARD
JK801
※
E3
M29
16
M17
※
M16
13
EARTH LUG
※
E2-2
14
EARTH LUG
CN851-JM
JK851
CN852-JM
JACK B CIRCUIT BOARD
1
28
M3
M11
14
EARTH LUG
11
9
11
EARTH LUG
11
M10
CN603-JM
5
POWER B CIRCUIT BOARD
5
11
EARTH LUG
C1
M37
23
23
M36
26
M35
M40
19
Q607
26
19
M35
M40
Q606
Q604
Q605
M39
M39
TH601
Q611
25
Q609
4
24
Q601
25
Q610
Q608
M36
23
HEATSINK
Q403,404
23
17
Q553
23
HEATSINK
CN405-JM
CN404-JM
HEATSINK
CN502-JM
CN505-JM
CN504-JM
CN401-JM
CN403-JM
CN503-JM
HEATSINK
Q505
23
HEATSINK
Q504
23
5
DRIVER B CIRCUIT BOARD
23
5
23
M37
15
R1
23
5
23
D1
CN507-JM
CN402-JM
CN501-JM
M5
M27
29
M18
HEATSINK
PACKING
M64
M63
M66
M67
M65
M60
M65
M61
M62
M65

CIRCUIT BOARD AND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2SD758-CD
B C E
25G4B41
BA4558DX
7 6 5
8 1 2 3 4
2SC1567-QR
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E C B
TA7317P
1
9
2SC2922M0Y
2SA1216M0Y
B C E
MC5707
RAMSA
1
15
EM1
MA165
MA167
1SS82
EM1Z
HZS20EB1
HZS2R7EB2
HZS39EB1
HZS12EB2
HZS16EB2
HZS6R8EB2
HZS6R2EB2
K A
K A
2SA968B-0Y
2SC2238B0Y
2SD1265-PQ
2SC2336B-PQ
2SA1006B-PQ
B C E
2SC2634-ST
2SA1127-ST
2SC2631-RS
2SC828A-RS
E C B
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B C E
LN031335PH
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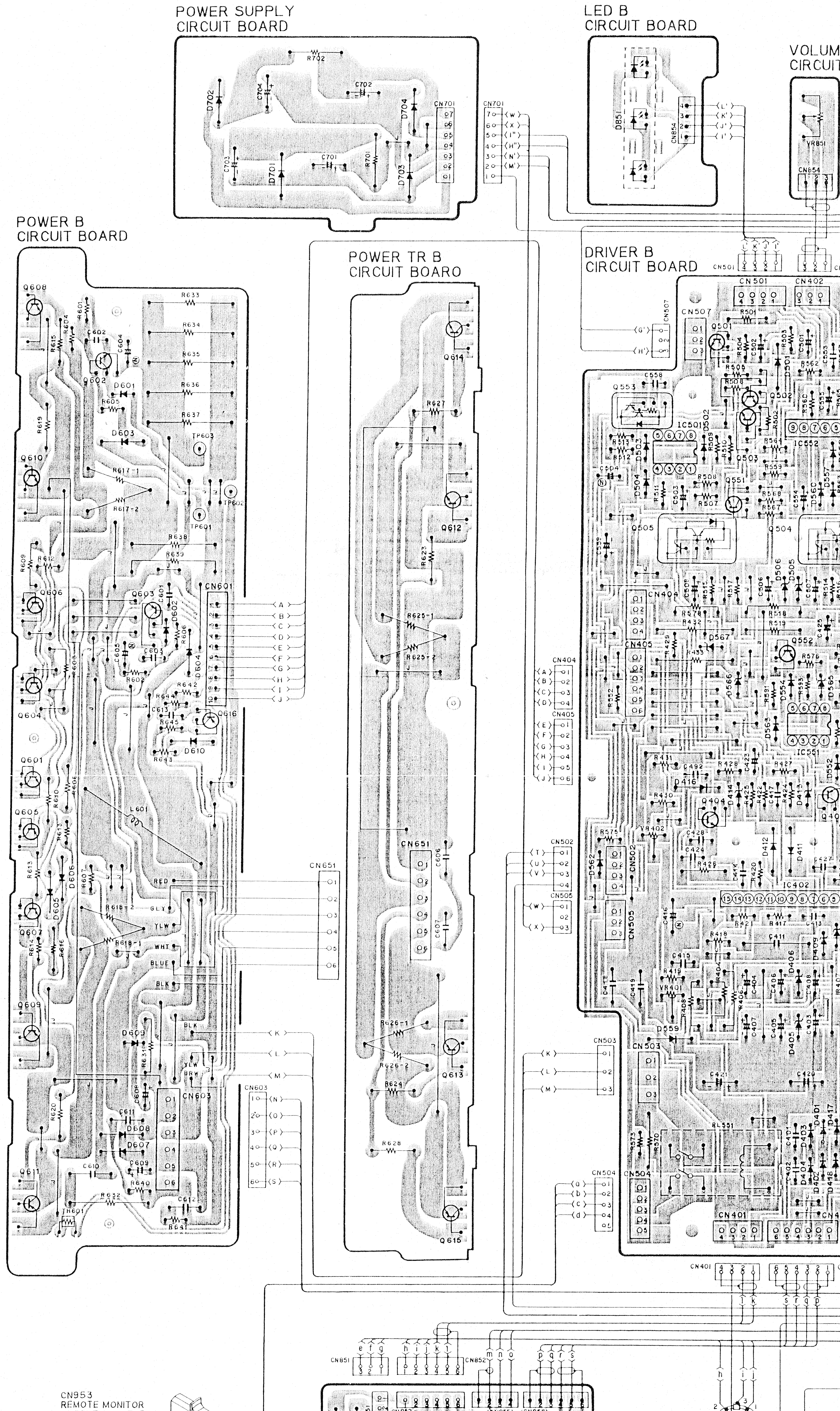
LN217RP
K A
MC8134
1 10


POWER SUPPLY CIRCUIT BOARD
LED B CIRCUIT BOARD
VOLUM CIRCUI
POWER B CIRCUIT BOARD
POWER TR B CIRCUIT BOARO
DRIVER B CIRCUIT BOARD
CN701
CN854
DB51
VR851
CN601
CN603
CN651
CN501
CN402
CN507
CN404
CN405
CN502
CN505
CN503
CN504
CN401
CN851
CN852
IC501
IC552
IC551
IC402
RL551
L601
TH601
TP601
TP602
TP603
RED
GLY
YLW
WHT
BLUE
BLK
BRW
Q601
Q602
Q603
Q604
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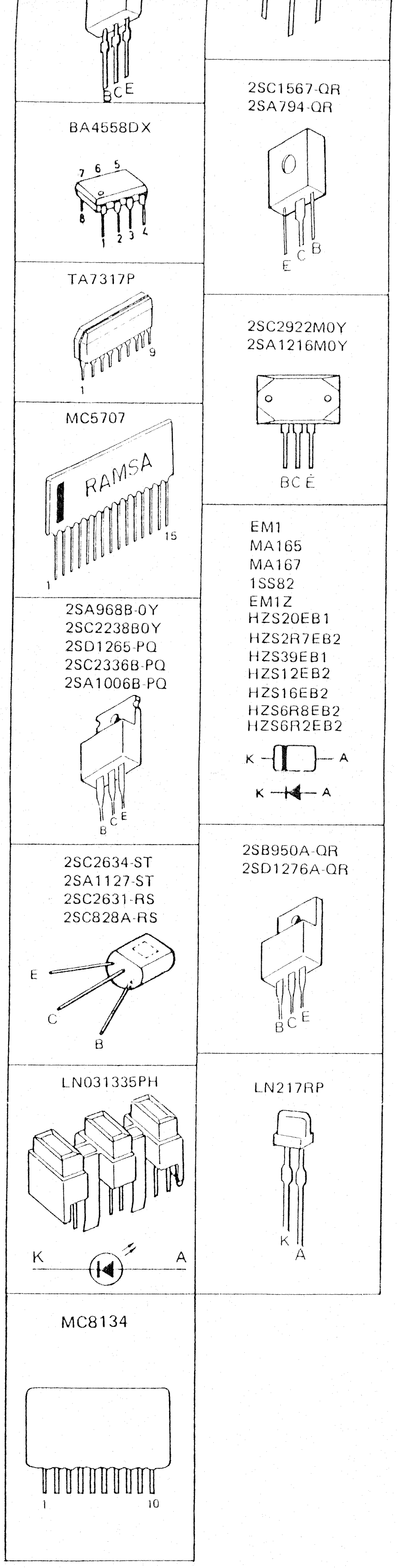
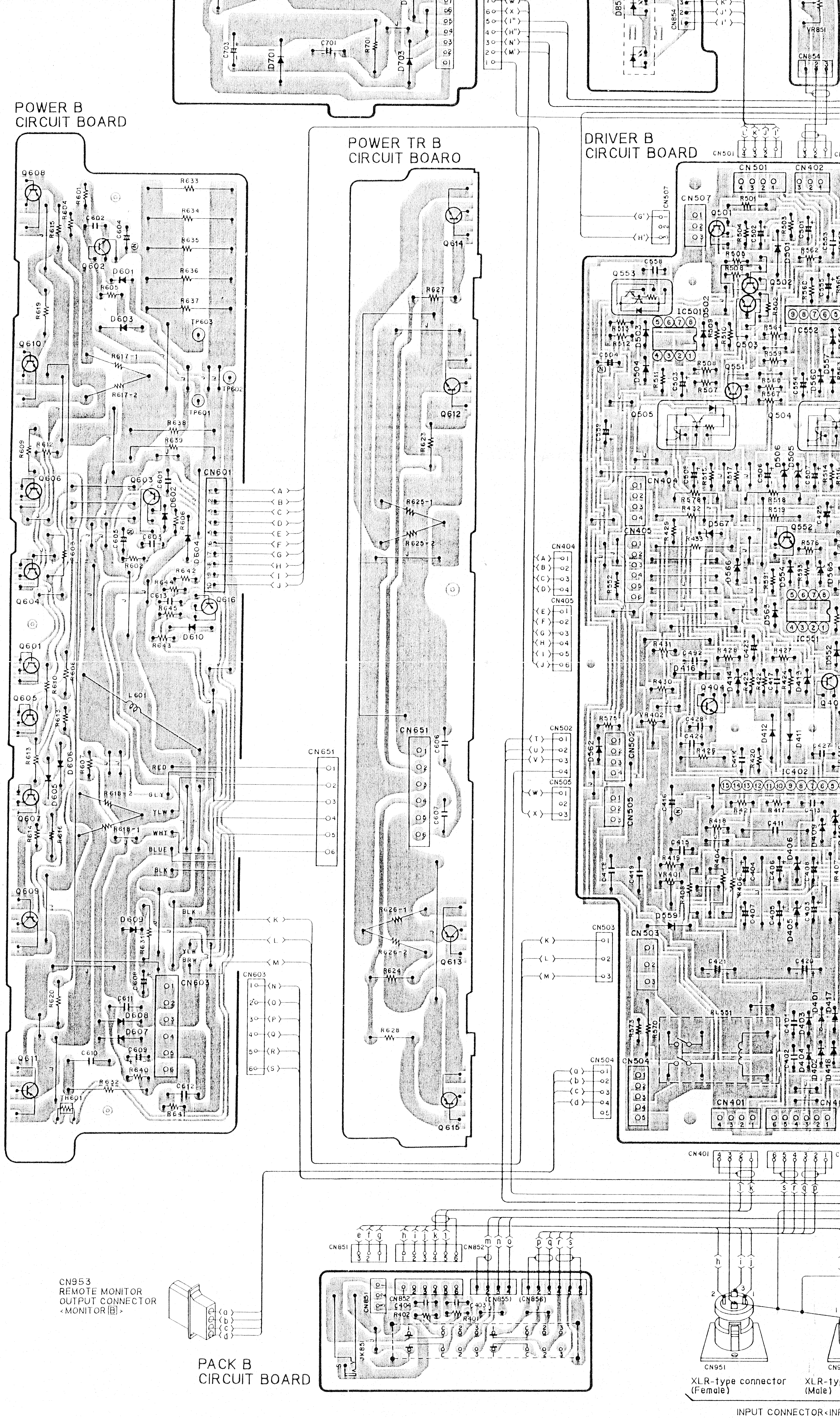
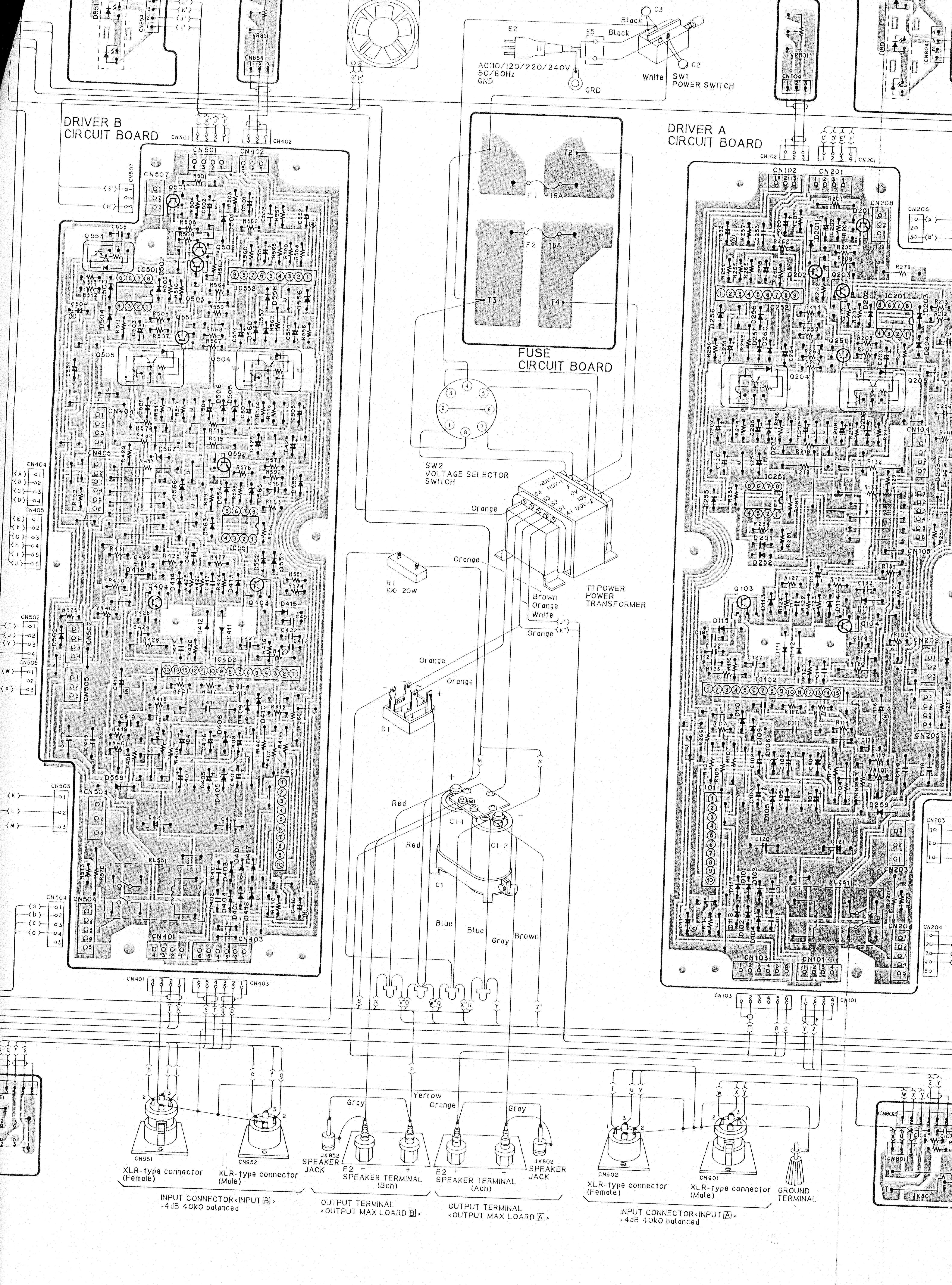
Q615
Q616
CN953
REMOTE MONITOR



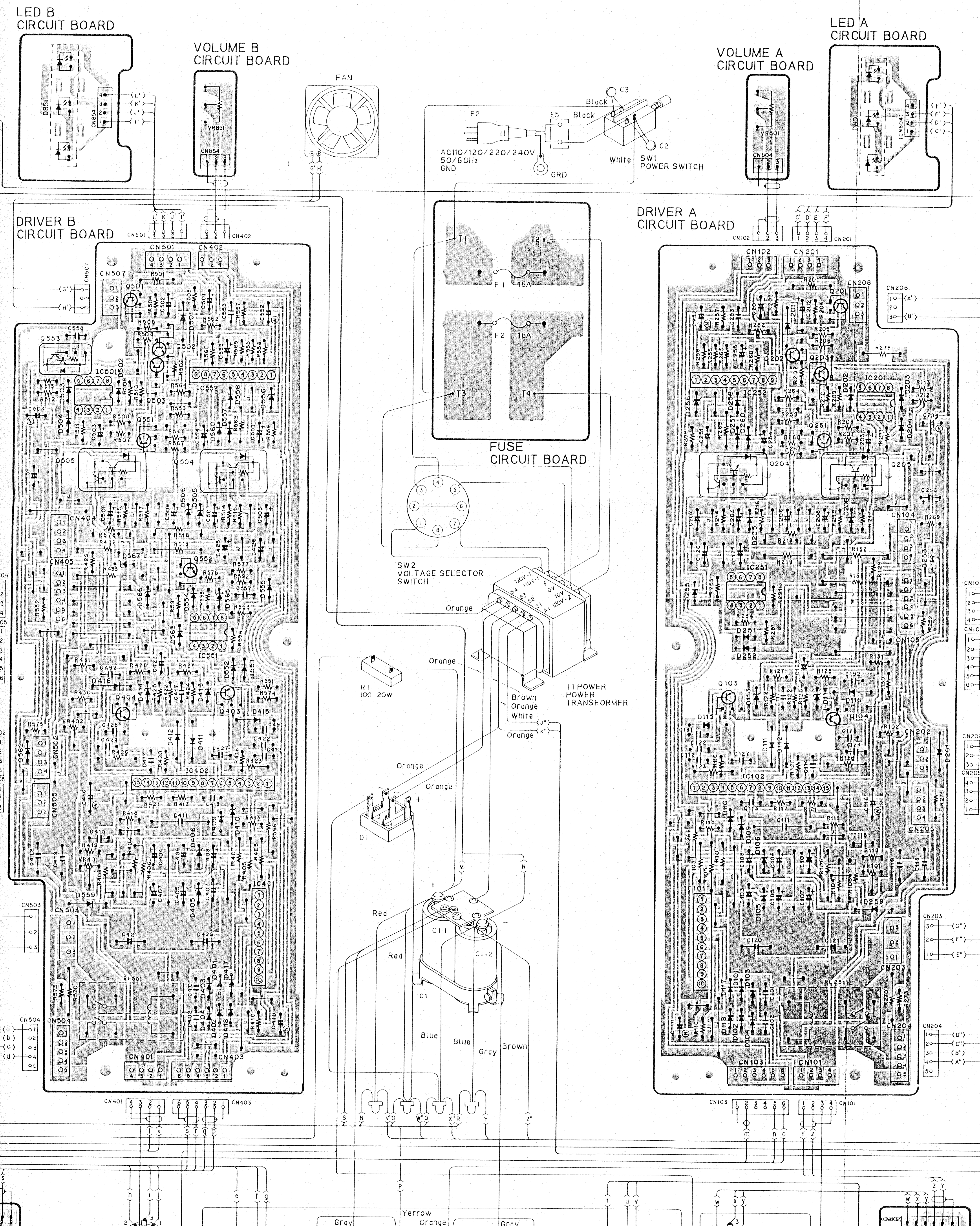
E
BA4558DX
TA7317P
MC5707
RAMSA
2SA968B-0Y
2SC2238B0Y
2SD1265-PQ
2SC2336B-PQ
2SA1006B-PQ
2SC2634-ST
2SA1127-ST
2SC2631-RS
2SC828A-RS
LN031335PH
MC8134
2SC1567-QR
2SA794-QR
2SC2922M0Y
2SA1216M0Y
EM1
MA165
MA167
1SS82
EM1Z
HZS20EB1
HZS2R7EB2
HZS39EB1
HZS12EB2
HZS16EB2
HZS6R8EB2
HZS6R2EB2
2SB950A-QR
2SD1276A-QR
LN217RP
K
A
B C E



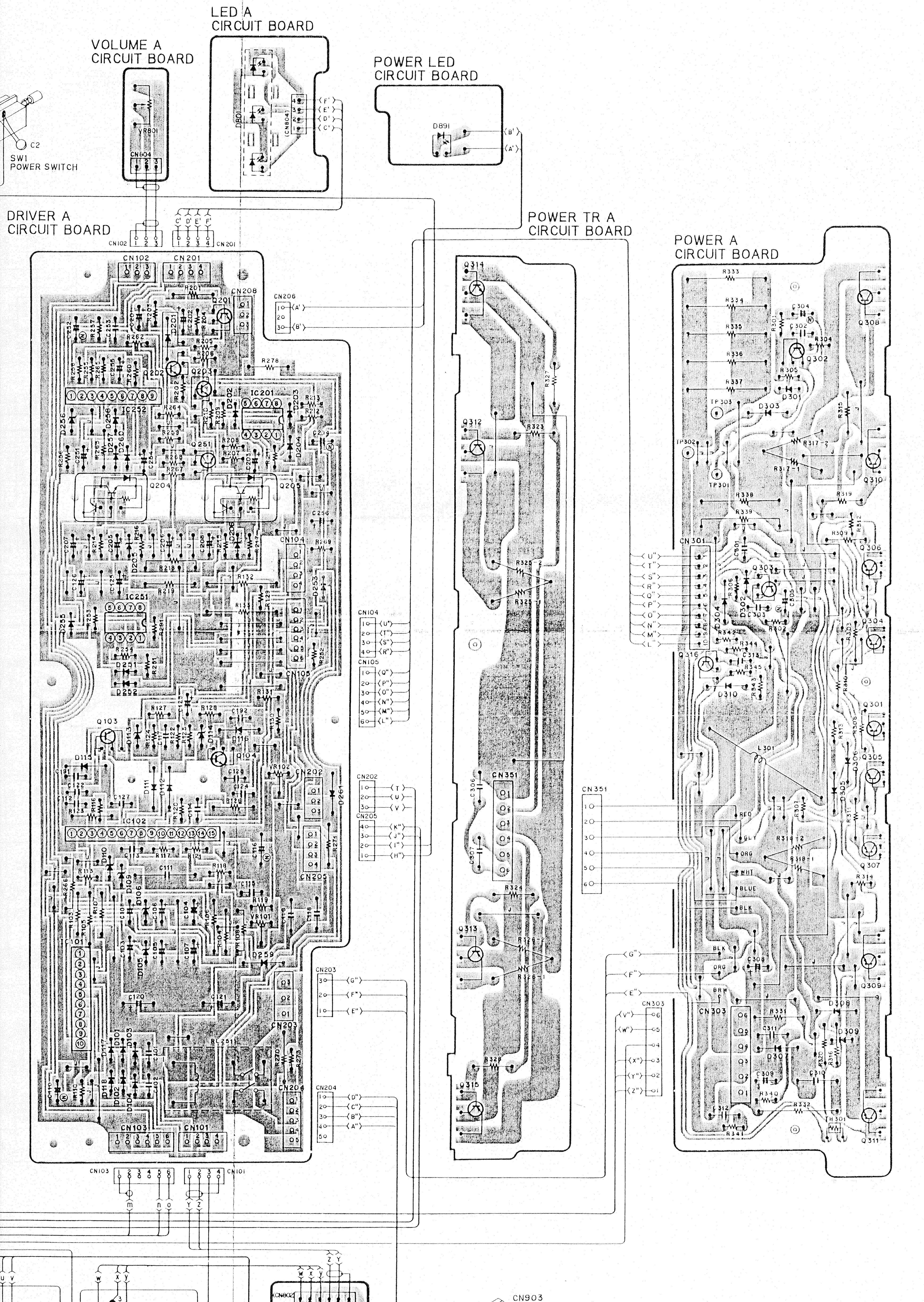
POWER B CIRCUIT BOARD
POWER TR B CIRCUIT BOARD
DRIVER B CIRCUIT BOARD
PACK B CIRCUIT BOARD
CN953 REMOTE MONITOR OUTPUT CONNECTOR <MONITOR B>
CN601
CN603
CN651
CN404
CN405
CN502
CN505
CN503
CN504
CN401
CN402
CN501
CN507
CN851
CN852
CN951
XLR-type connector (Female)
XLR-ty (Male)
INPUT CONNECTOR<INP
+4dB 40kΩ balanced

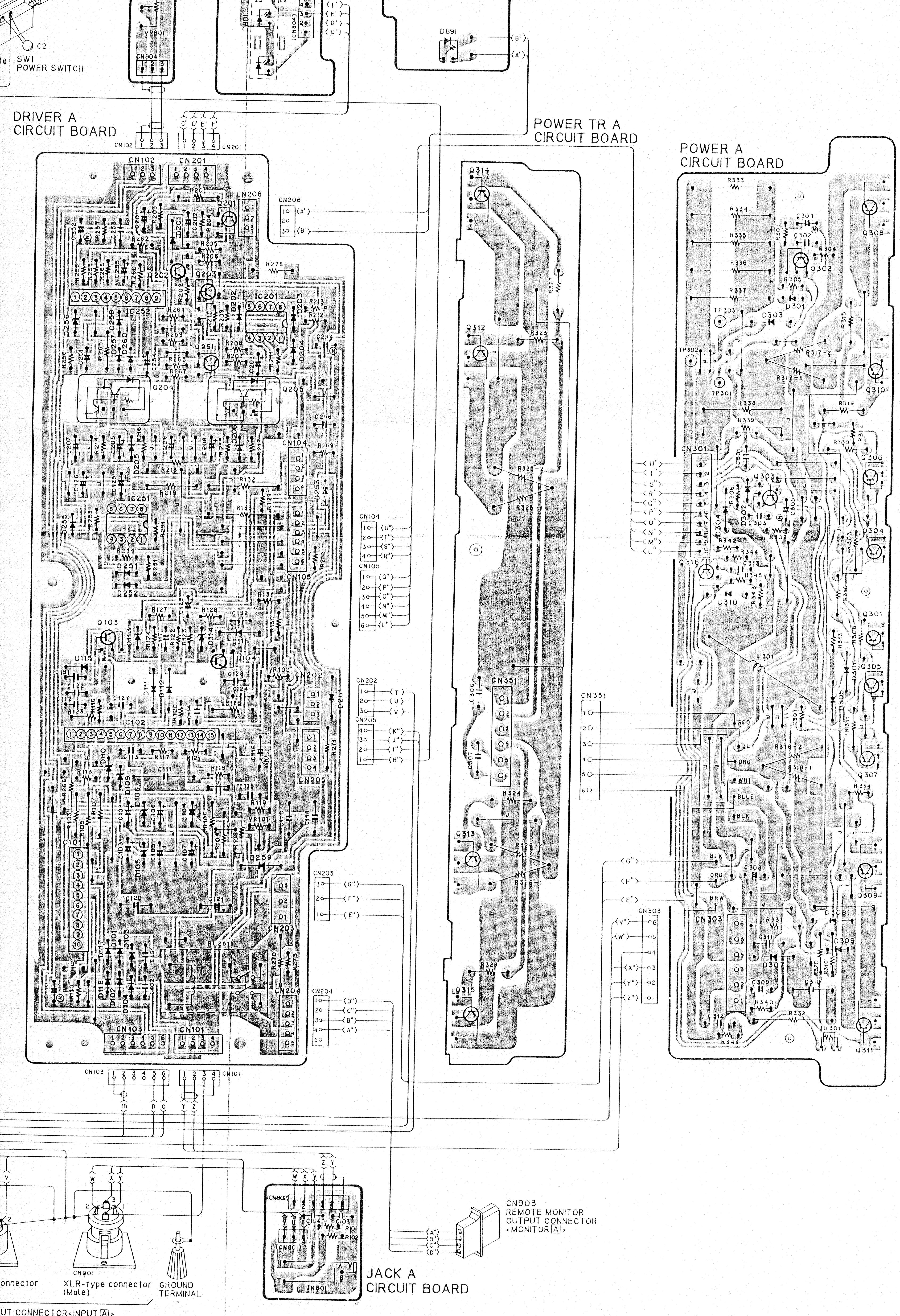

DRIVER B
CIRCUIT BOARD
DRIVER A
CIRCUIT BOARD
FUSE
CIRCUIT BOARD
E2
E5
Black
C3
C2
AC110/120/220/240V
50/60Hz
GND
GRD
White
SW1
POWER SWITCH
T1
T2
T3
T4
F1 15A
F2 15A
SW2
VOLTAGE SELECTOR
SWITCH
T1 POWER
POWER
TRANSFORMER
Orange
Brown
White
R1
100 20W
D1
C1-1
C1-2
C1
Red
Blue
Gray
Yerrow
CN951
XLR-type connector
(Female)
CN952
XLR-type connector
(Male)
JK852
SPEAKER
JACK
E2 −
SPEAKER TERMINAL
(Bch)
E2 +
SPEAKER TERMINAL
(Ach)
JK802
SPEAKER
JACK
CN902
XLR-type connector
(Female)
CN901
XLR-type connector
(Male)
GROUND
TERMINAL
INPUT CONNECTOR‹INPUT B›
+4dB 40kΩ balanced
OUTPUT TERMINAL
‹OUTPUT MAX LOARD B›
OUTPUT TERMINAL
‹OUTPUT MAX LOARD A›
INPUT CONNECTOR‹INPUT A›
+4dB 40kΩ balanced
CN401
CN403
CN103
CN101
CN501
CN402
CN102
CN201
CN507
CN404
CN405
CN502
CN505
CN503
CN504
CN208
CN206
CN104
CN105
CN202
CN205
CN203
CN204
CN854
CN604
VR851
VR801
DB51
DB01
JK801

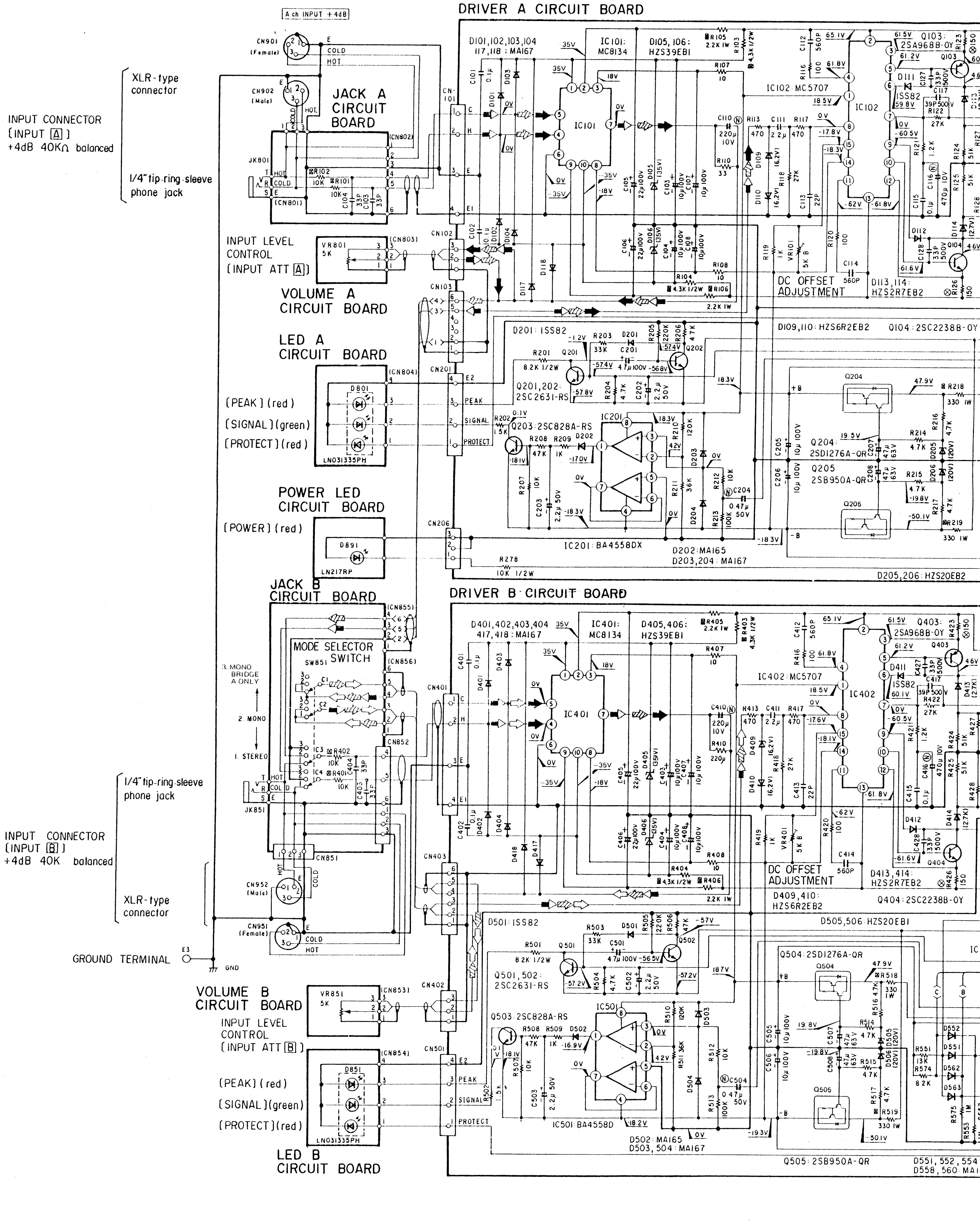
CIRCUIT BOARD AND WIRING CONNECTION DIAGRAM OF WP-9220E

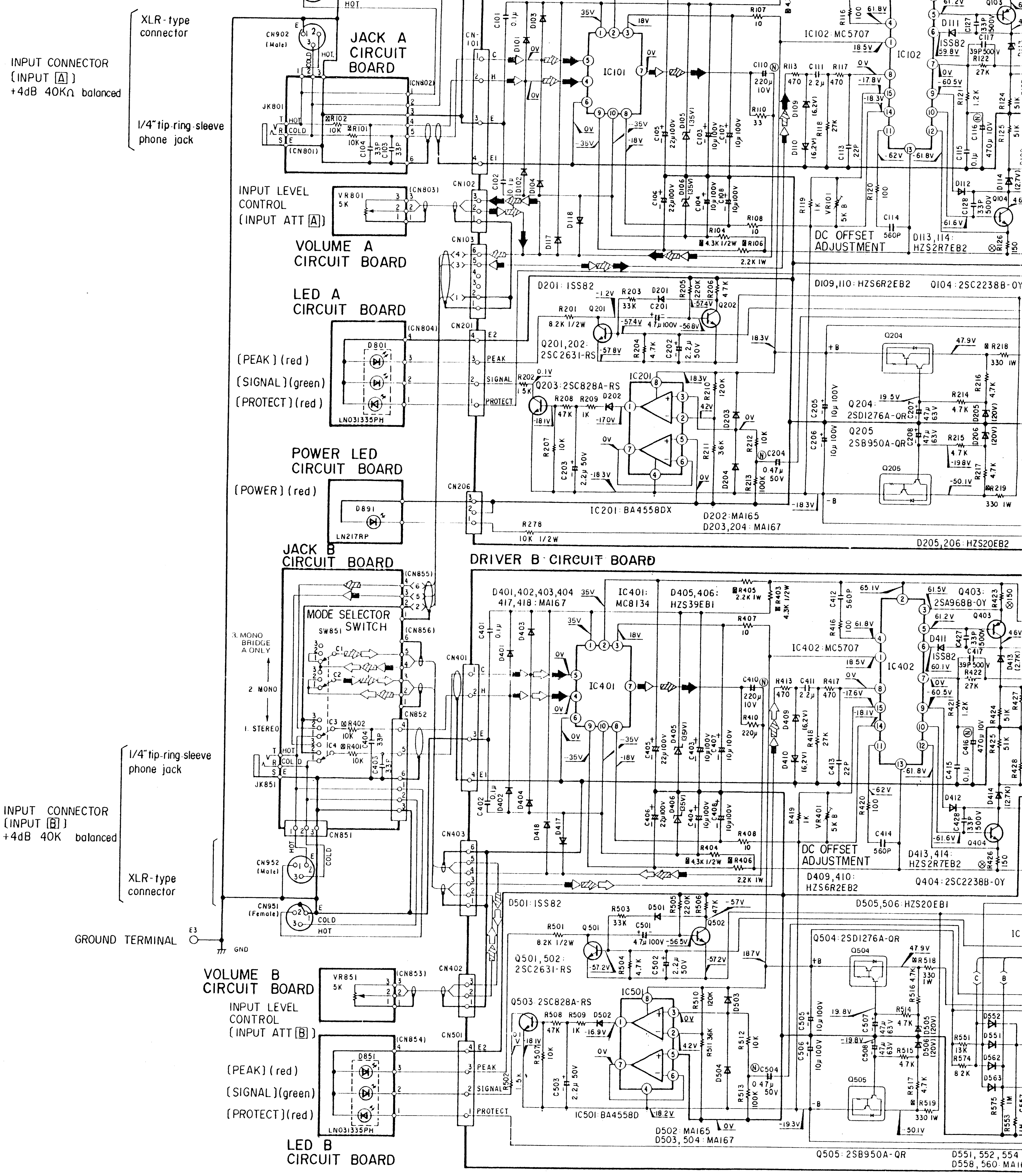

LED B
CIRCUIT BOARD
D851
CN854
VOLUME B
CIRCUIT BOARD
VR851
CN854
FAN
E2
E5
Black
Black
C3
C2
AC110/120/220/240V
50/60Hz
GND
GRD
White
SW1
POWER SWITCH
VOLUME A
CIRCUIT BOARD
VR801
CN804
LED A
CIRCUIT BOARD
D801
CN804
DRIVER B
CIRCUIT BOARD
CN501
CN402
CN507
DRIVER A
CIRCUIT BOARD
CN102
CN201
CN206
CN208
T1
T2
F1
15A
F2
15A
T3
T4
FUSE
CIRCUIT BOARD
SW2
VOLTAGE SELECTOR
SWITCH
Orange
Orange
R1
100 20W
T1 POWER
POWER
TRANSFORMER
Brown
Orange
White
Orange
Orange
Orange
D1
Red
Red
C1-1
C1-2
C1
Blue
Blue
Gray
Brown
IC552
IC501
IC551
IC402
IC401
IC201
IC252
IC251
IC102
IC101
Q553
Q501
Q502
Q503
Q551
Q505
Q504
Q552
Q404
Q201
Q202
Q203
Q251
Q204
Q205
Q103
Q104
RL551
RL251
CN404
CN405
CN502
CN505
CN503
CN504
CN401
CN403
CN104
CN105
CN202
CN205
CN203
CN204
CN103
CN101
Yerrow
Orange
Gray
Gray

F WP-9220E


LED A CIRCUIT BOARD
VOLUME A CIRCUIT BOARD
POWER LED CIRCUIT BOARD
SW1 POWER SWITCH
C2
VR801
CN804
D801
CN804
D891
DRIVER A CIRCUIT BOARD
CN102
CN201
POWER TR A CIRCUIT BOARD
POWER A CIRCUIT BOARD
CN206
CN208
CN104
CN105
CN202
CN205
CN203
CN204
CN103
CN101
CN351
CN301
CN303
IC201
IC252
IC251
IC102
Q201
Q202
Q203
Q204
Q205
Q251
Q103
Q104
Q312
Q313
Q314
Q315
Q301
Q302
Q303
Q304
Q305
Q306
Q307
Q308
Q309
Q310
Q311
Q316
L301
TH301
TP301
TP302
TP303
RED
GLY
ORG
WHT
BLUE
BLK
BRW
CN903
CN802


SW1
POWER SWITCH
C2
VR801
CN604
D891
DRIVER A
CIRCUIT BOARD
CN102
CN201
CN208
CN206
IC201
IC252
IC251
IC102
Q201
Q202
Q203
Q204
Q205
Q251
Q103
Q104
CN104
CN105
CN202
CN205
CN203
CN204
CN103
CN101
RL251
POWER TR A
CIRCUIT BOARD
Q314
Q312
Q313
Q315
CN351
POWER A
CIRCUIT BOARD
CN301
CN303
L301
Q301
Q302
Q303
Q304
Q305
Q306
Q307
Q308
Q309
Q310
Q311
Q316
TH301
CN903
REMOTE MONITOR
OUTPUT CONNECTOR
<MONITOR A>
CN901
XLR-type connector
(Male)
GROUND
TERMINAL
onnector
UT CONNECTOR<INPUT A>
dB 40kΩ balanced
CN802
CN801
JK801
JACK A
CIRCUIT BOARD


DRIVER A CIRCUIT BOARD
A ch INPUT +4dB
CN901 (Female)
CN902 (Male)
COLD
HOT
XLR-type connector
INPUT CONNECTOR
[INPUT A]
+4dB 40KΩ balanced
1/4" tip-ring-sleeve phone jack
JACK A CIRCUIT BOARD
JK801
INPUT LEVEL CONTROL [INPUT ATT A]
VR801 5K
VOLUME A CIRCUIT BOARD
LED A CIRCUIT BOARD
D801
[PEAK] (red)
[SIGNAL] (green)
[PROTECT] (red)
LN031335PH
POWER LED CIRCUIT BOARD
[POWER] (red)
D891
LN217RP
D101,102,103,104 117,118 : MA167
IC101: MC8134
D105,106: HZS39EB1
IC102: MC5707
Q103: 2SA968B-OY
DC OFFSET ADJUSTMENT
D113,114: HZS2R7EB2
D109,110: HZS6R2EB2
Q104: 2SC2238B-OY
D201: ISS82
Q201,202: 2SC2631-RS
Q203: 2SC828A-RS
IC201: BA4558DX
D202: MA165
D203,204: MA167
Q204: 2SD1276A-QR
Q205: 2SB950A-QR
D205,206: HZS20EB2
JACK B CIRCUIT BOARD
DRIVER B CIRCUIT BOARD
MODE SELECTOR SWITCH
SW851
3. MONO BRIDGE A ONLY
2. MONO
1. STEREO
JK851
INPUT CONNECTOR
[INPUT B]
+4dB 40K balanced
CN952 (Male)
CN951 (Female)
GROUND TERMINAL
GND
VOLUME B CIRCUIT BOARD
VR851 5K
INPUT LEVEL CONTROL [INPUT ATT B]
D851
LN031335PH
LED B CIRCUIT BOARD
D401,402,403,404 417,418 : MA167
IC401: MC8134
D405,406: HZS39EB1
IC402: MC5707
Q403: 2SA968B-OY
D413,414: HZS2R7EB2
D409,410: HZS6R2EB2
Q404: 2SC2238B-OY
D501: ISS82
Q501,502: 2SC2631-RS
Q503: 2SC828A-RS
IC501: BA4558D
D502: MA165
D503,504: MA167
D505,506: HZS20EB1
Q504: 2SD1276A-QR
Q505: 2SB950A-QR
D551,552,554
D558,560 MA


INPUT CONNECTOR
[INPUT A]
+4dB 40KΩ balanced
XLR-type connector
1/4" tip-ring-sleeve phone jack
CN902 (Male)
JACK A CIRCUIT BOARD
JK801
INPUT LEVEL CONTROL
[INPUT ATT A]
VR801 5K
VOLUME A CIRCUIT BOARD
LED A CIRCUIT BOARD
[PEAK] (red)
[SIGNAL] (green)
[PROTECT] (red)
D801
LN031335PH
POWER LED CIRCUIT BOARD
[POWER] (red)
D891
LN217RP
IC101
IC102 MC5707
DC OFFSET ADJUSTMENT
D113,114: HZS2R7EB2
D109,110: HZS6R2EB2
Q104: 2SC2238B-OY
D201: 1SS82
Q201,202: 2SC2631-RS
Q203: 2SC828A-RS
IC201: BA4558DX
D202: MA165
D203,204: MA167
Q204: 2SD1276A-QR
Q205: 2SB950A-QR
D205,206: HZS20EB2
JACK B CIRCUIT BOARD
DRIVER B CIRCUIT BOARD
MODE SELECTOR SWITCH
SW851
3. MONO BRIDGE A ONLY
2. MONO
1. STEREO
D401,402,403,404 417,418: MA167
IC401: MC8134
D405,406: HZS39EB1
IC402 MC5707
D413,414: HZS2R7EB2
D409,410: HZS6R2EB2
Q404: 2SC2238B-OY
Q403: 2SA968B-OY
INPUT CONNECTOR
[INPUT B]
+4dB 40K balanced
JK851
CN952 (Male)
CN951 (Female)
GROUND TERMINAL
GND
VOLUME B CIRCUIT BOARD
INPUT LEVEL CONTROL
[INPUT ATT B]
VR851 5K
D501: 1SS82
Q501,502: 2SC2631-RS
Q503: 2SC828A-RS
IC501: BA4558D
D502: MA165
D503,504: MA167
Q504: 2SD1276A-QR
Q505: 2SB950A-QR
D505,506: HZS20EB1
D851
LN031335PH
LED B CIRCUIT BOARD

<SIGNAL CHART>

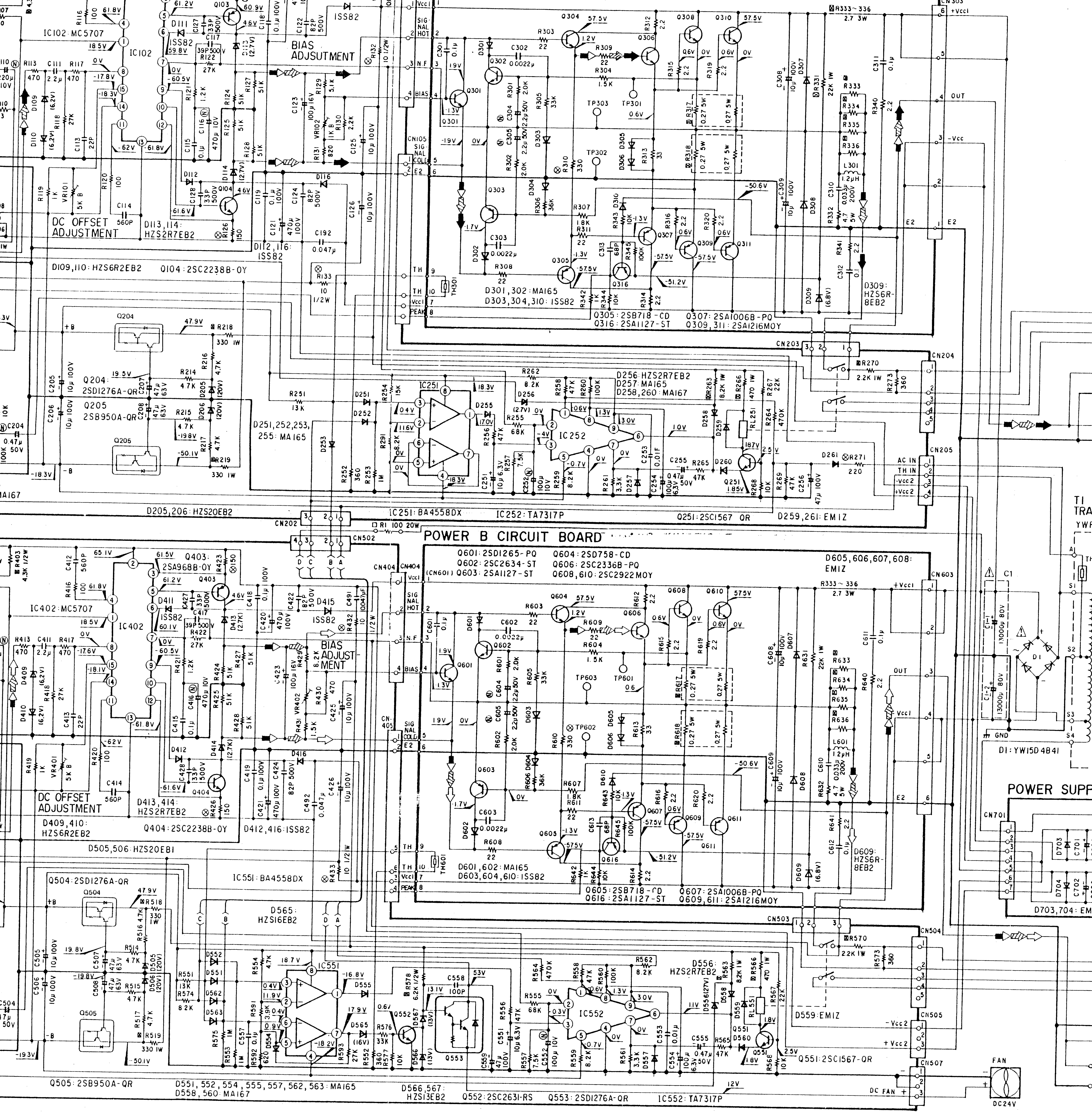
➡ Ach Input Signal

▨ Monoral Input Signal

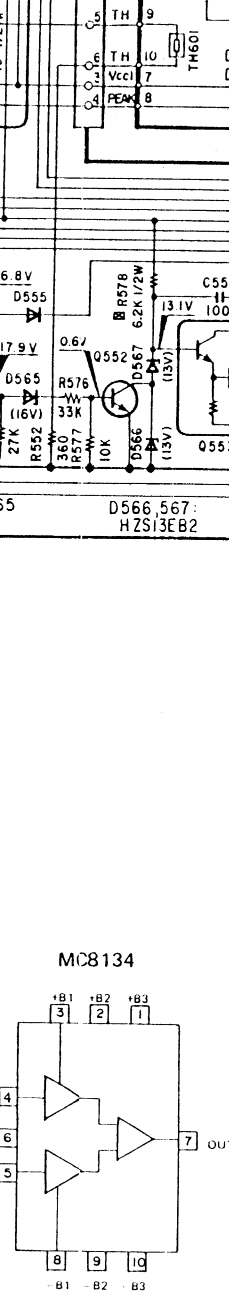
■▷ Mono Bridge Input Signal

⇨ Bch Input Signal

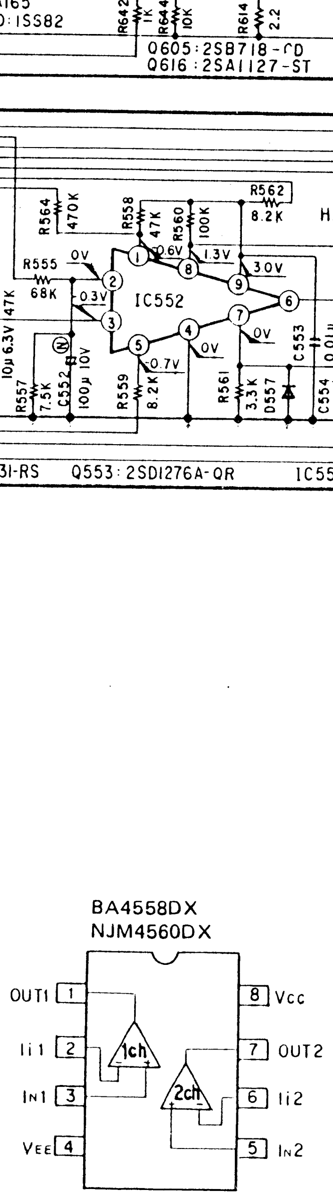
M


IC102: MC5707
IC102
Q103
Q104: 2SC2238B-OY
D109, 110: HZS6R2EB2
D111
ISS82
BIAS ADJUSTMENT
DC OFFSET ADJUSTMENT
D113, 114: HZS2R7EB2
D112, 116: ISS82
VR101 5K B
VR102 1K B
R133 10 1/2W
CN105
SIG NAL HOT
N F
BIAS
SIG NAL COLD
E2
TH
Vcc1
PEAK
Q304
Q306
Q308
Q310
Q301
Q302
Q303
Q305
Q307
Q309
Q311
Q316
TP301
TP302
TP303
TH301
D301, 302: MA165
D303, 304, 310: ISS82
Q305: 2SB718-CD
Q316: 2SA1127-ST
Q307: 2SA1006B-PQ
Q309, 311: 2SA1216MOY
R333~336 2.7 3W
CN303
+Vcc1
OUT
-Vcc
E2
L301 1.2μH
D309: HZS6R-8EB2
Q204
Q204: 2SD1276A-QR
Q205
Q205: 2SB950A-QR
+B
-B
D205, 206: HZS20EB2
IC251
IC251: BA4558DX
IC252
IC252: TA7317P
D251, 252, 253, 255: MA165
D256: HZS2R7EB2
D257: MA165
D258, 260: MA167
D259, 261: EM1Z
Q251: 2SC1567 QR
RL251
CN202
CN203
CN204
CN205
AC IN
TH IN
-Vcc2
+Vcc2
R270 2.2K 1W
R1 100 20W
CN502
POWER B CIRCUIT BOARD
Q601: 2SD1265-PQ
Q602: 2SC2634-ST
Q603: 2SA1127-ST
Q604: 2SD758-CD
Q606: 2SC2336B-PQ
Q608, 610: 2SC2922MOY
D605, 606, 607, 608: EM1Z
CN404
CN601
CN405
CN603
IC402: MC5707
IC402
Q403
Q403: 2SA968B-OY
Q404
Q404: 2SC2238B-OY
D409, 410: HZS6R2EB2
D411
D412, 416: ISS82
D413, 414: HZS2R7EB2
D505, 506: HZS20EB1
BIAS ADJUSTMENT
DC OFFSET ADJUSTMENT
VR401
VR402
TP601
TP602
TP603
TH601
D601, 602: MA165
D603, 604, 610: ISS82
Q605: 2SB718-CD
Q616: 2SA1127-ST
Q607: 2SA1006B-PQ
Q609, 611: 2SA1216MOY
L601 1.2μH
D609: HZS6R-8EB2
CN503
CN504
CN505
CN507
IC551: BA4558DX
IC551
IC552
IC552: TA7317P
Q504: 2SD1276A-QR
Q504
Q505
Q505: 2SB950A-QR
D565: HZS16EB2
D551, 552, 554, 555, 557, 562, 563: MA165
D558, 560: MA167
D556: HZS2R7EB2
D559: EM1Z
D566, 567: HZS13EB2
Q551: 2SC1567-QR
Q552: 2SC2631-RS
Q553: 2SD1276A-QR
RL551
R570 22K 1W
DC FAN
FAN
DC24V
T1 TRA
YWF
C1
C1-1 13000μ 80V
C1-2 13000μ 80V
D1
D1: YW15D4B41
GND
S1
S2
S3
S4
POWER SUPP
CN701
D703, 704: EM

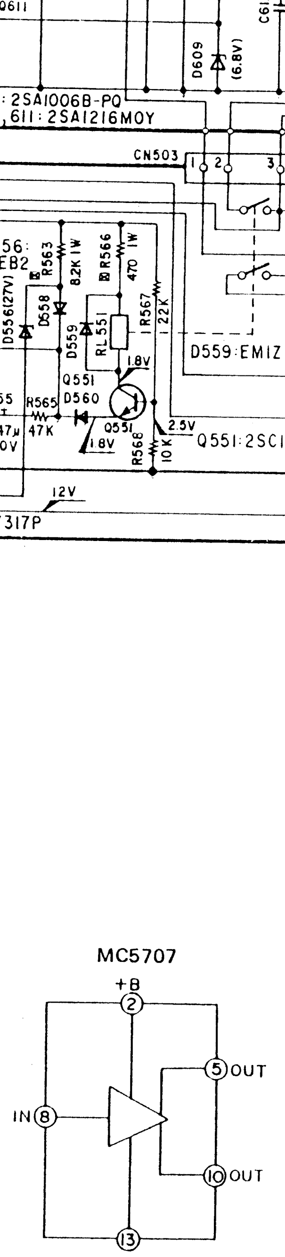
MC8134


+B1
+B2
+B3
3
2
1
IN C
GND
IN H
6
5
7
OUT
8
9
10
-B1
-B2
-B3

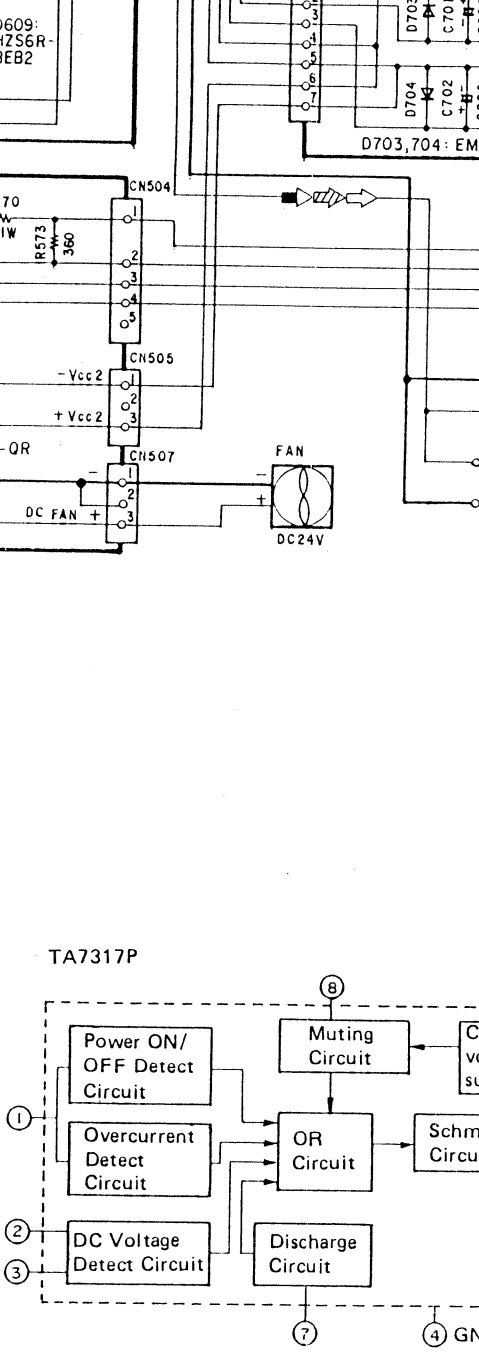
BA4558DX
NJM4560DX


OUT1
Ii 1
In1
VEE
1
2
3
4
8
7
6
5
Vcc
OUT2
Ii2
In2
1ch
2ch

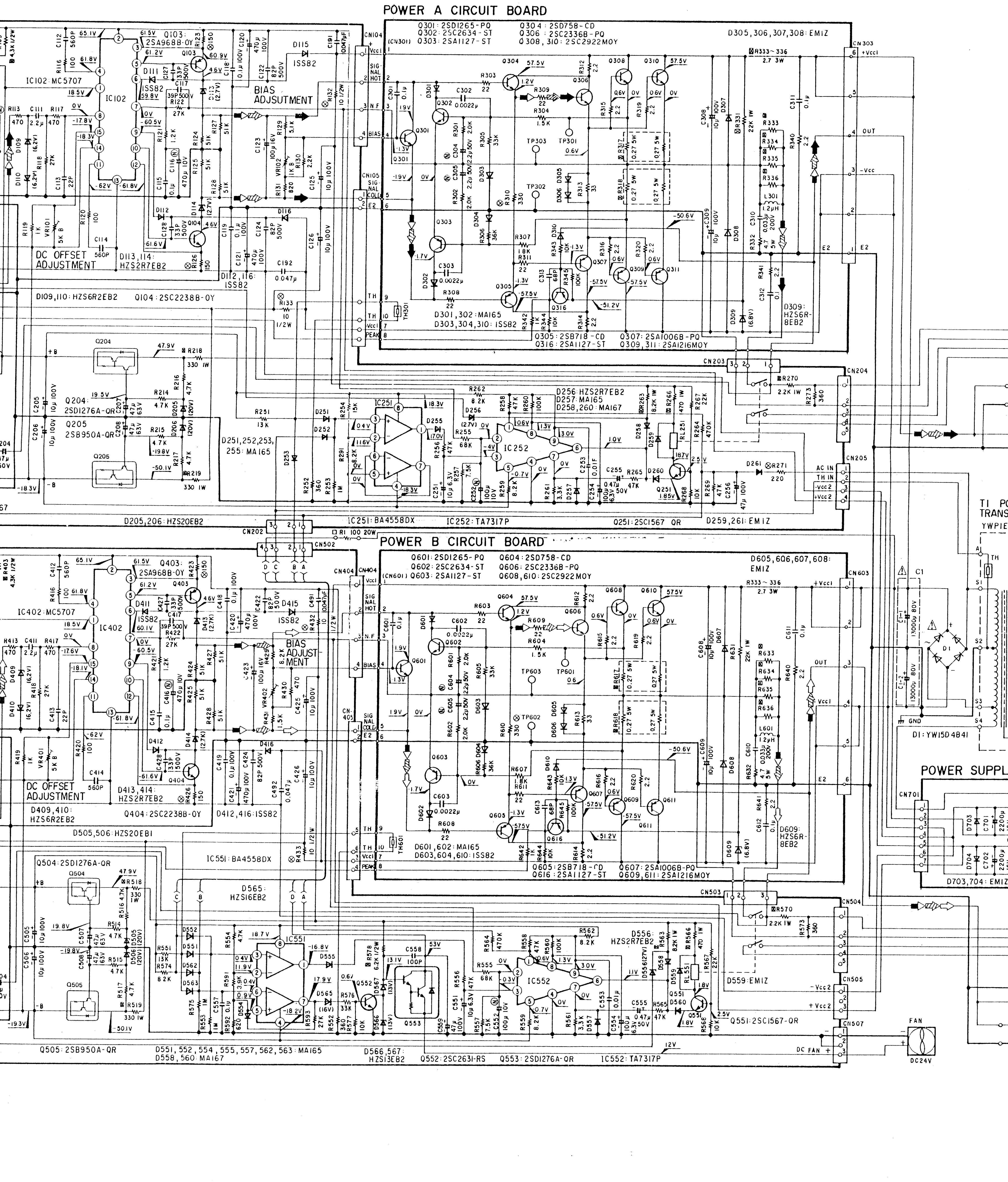
MC5707


+B
2
IN
8
5
OUT
10
OUT
13
-B

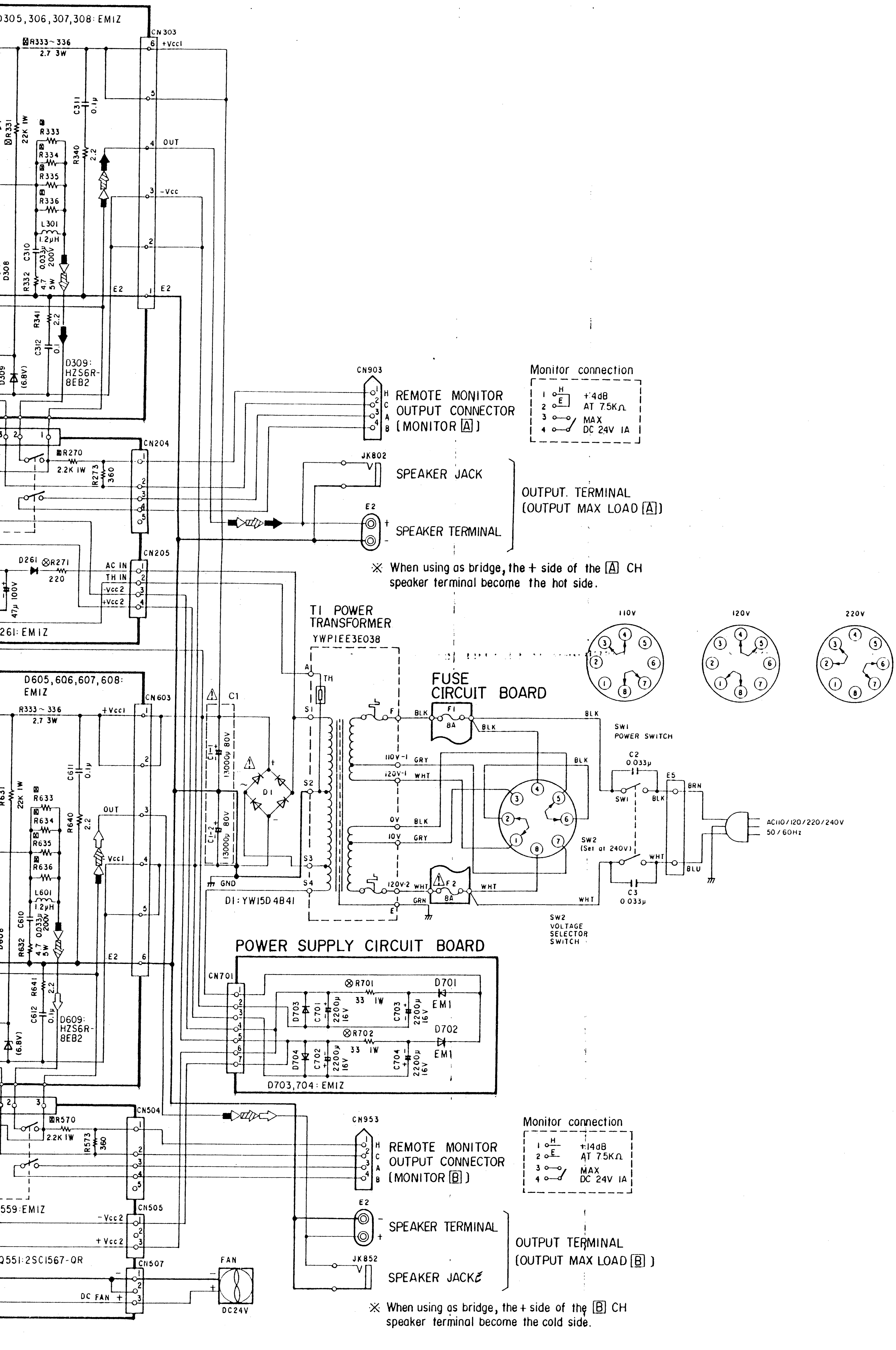
TA7317P


8
Power ON/ OFF Detect Circuit
Muting Circuit
1
Overcurrent Detect Circuit
OR Circuit
Schm
2
3
DC Voltage Detect Circuit
Discharge Circuit
7
4 GN

SCHEMATIC DIAGRAM OF WP-9110E

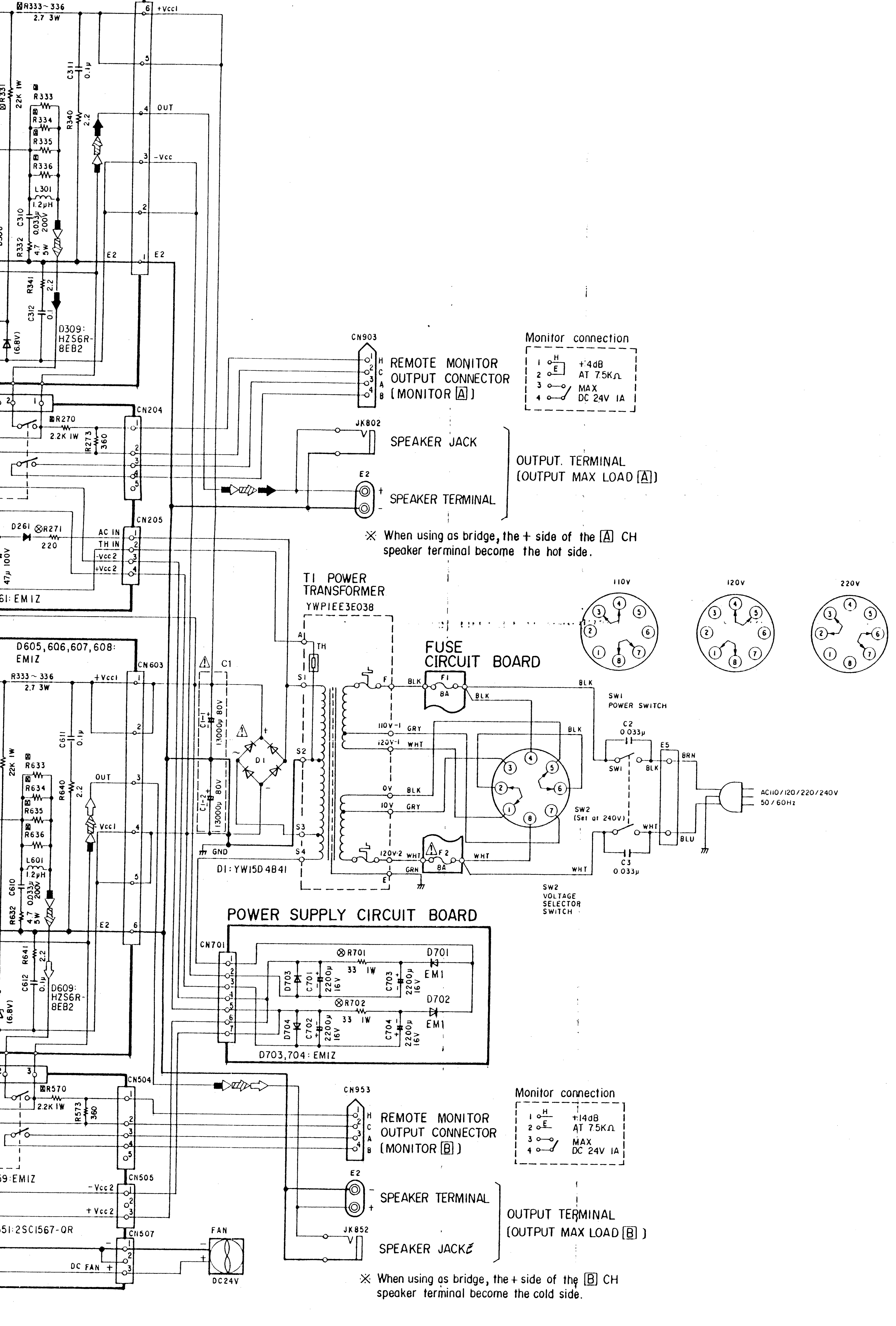


POWER A CIRCUIT BOARD
Q301: 2SD1265-PQ
Q302: 2SC2634-ST
Q303: 2SA1127-ST
Q304: 2SD758-CD
Q306: 2SC2336B-PQ
Q308, 310: 2SC2922MOY
D305, 306, 307, 308: EM1Z
R333~336 2.7 3W
IC102: MC5707
Q103: 2SA968B-OY
BIAS ADJUSTMENT
DC OFFSET ADJUSTMENT
D113, 114: HZS2R7EB2
D112, 116: 1SS82
D109, 110: HZS6R2EB2
Q104: 2SC2238B-OY
D301, 302: MA165
D303, 304, 310: 1SS82
Q305: 2SB718-CD
Q316: 2SA1127-ST
Q307: 2SA1006B-PQ
Q309, 311: 2SA1216MOY
D309: HZS6R-8EB2
Q204: 2SD1276A-QR
Q205: 2SB950A-QR
D251, 252, 253, 255: MA165
D256: HZS2R7EB2
D257: MA165
D258, 260: MA167
D205, 206: HZS20EB2
IC251: BA4558DX
IC252: TA7317P
Q251: 2SC1567 QR
D259, 261: EM1Z
R1 100 20W
POWER B CIRCUIT BOARD
Q601: 2SD1265-PQ
Q602: 2SC2634-ST
Q603: 2SA1127-ST
Q604: 2SD758-CD
Q606: 2SC2336B-PQ
Q608, 610: 2SC2922MOY
D605, 606, 607, 608: EM1Z
IC402: MC5707
Q403: 2SA968B-OY
BIAS ADJUSTMENT
DC OFFSET ADJUSTMENT
D409, 410: HZS6R2EB2
D413, 414: HZS2R7EB2
Q404: 2SC2238B-OY
D412, 416: 1SS82
D505, 506: HZS20EB1
D601, 602: MA165
D603, 604, 610: 1SS82
Q605: 2SB718-CD
Q616: 2SA1127-ST
Q607: 2SA1006B-PQ
Q609, 611: 2SA1216MOY
D609: HZS6R-8EB2
Q504: 2SD1276A-QR
Q505: 2SB950A-QR
IC551: BA4558DX
D565: HZS16EB2
D551, 552, 554, 555, 557, 562, 563: MA165
D558, 560: MA167
D556: HZS2R7EB2
D566, 567: HZS13EB2
Q552: 2SC2631-RS
Q553: 2SD1276A-QR
IC552: TA7317P
Q551: 2SC1567-QR
D559: EM1Z
T1 POWER TRANS
D1: YW15D4B41
POWER SUPPLY
D703, 704: EM1Z
FAN DC24V
DC FAN
CN104
CN105
CN203
CN204
CN205
CN202
CN502
CN303
CN404
CN405
CN603
CN503
CN504
CN505
CN507
CN701

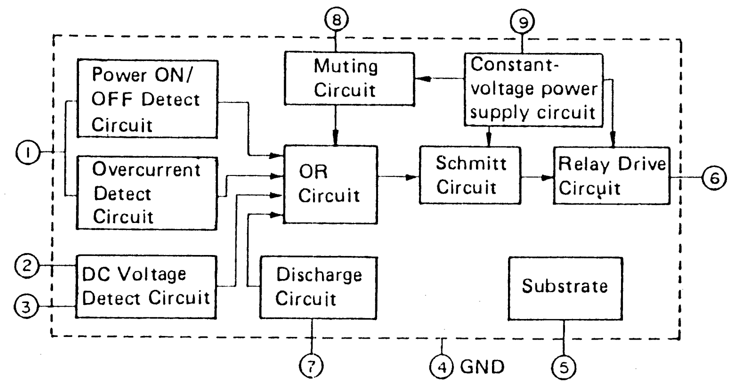

D305,306,307,308: EMIZ
CN303
+Vcc1
OUT
-Vcc
E2
R333~336 2.7 3W
R331 22K 1W
C311 0.1μ
R340 2.2
R333
R334
R335
R336
L301 1.2μH
C310 0.033μ 200V
R332 4.7 5W
D308
R341 2.2
C312 0.1
D309: HZS6R-8EB2
(6.8V)
CN204
R270 2.2K 1W
R273 360
CN205
AC IN
TH IN
-Vcc2
+Vcc2
D261
R271 220
47μ 100V
261: EMIZ
D605,606,607,608: EMIZ
CN603
R633~336 2.7 3W
R631 22K 1W
C611 0.1μ
R640 2.2
R633
R634
R635
R636
L601 1.2μH
C610 0.033μ 200V
R632 4.7 5W
R641 2.2
C612 0.1μ
D609: HZS6R-8EB2
(6.8V)
CN504
R570 22K 1W
R573 360
559: EMIZ
CN505
-Vcc2
+Vcc2
Q551: 2SC1567-QR
CN507
DC FAN
FAN
DC24V
C1
C1-1 13000μ 80V
C1-2 13000μ 80V
D1
D1: YW15D4B41
GND
T1 POWER TRANSFORMER
YWP1EE3E038
TH
S1
S2
S3
S4
FUSE CIRCUIT BOARD
F1 8A
F2 8A
BLK
GRY
WHT
GRN
110V-1
120V-1
0V
10V
120V-2
SW1 POWER SWITCH
C2 0.033μ
C3 0.033μ
SW2 (Set at 240V)
SW2 VOLTAGE SELECTOR SWITCH
E5
BRN
BLU
AC110/120/220/240V 50/60Hz
110V
120V
220V
POWER SUPPLY CIRCUIT BOARD
CN701
R701 33 1W
R702 33 1W
D701 EM1
D702 EM1
D703
D704
C701 2200μ 16V
C702 2200μ 16V
C703 2200μ 16V
C704 2200μ 16V
D703,704: EMIZ
CN903
REMOTE MONITOR OUTPUT CONNECTOR (MONITOR A)
Monitor connection
1 H
2 E
+4dB AT 7.5KΩ
3
4
MAX DC 24V 1A
JK802
SPEAKER JACK
E2
SPEAKER TERMINAL
OUTPUT TERMINAL (OUTPUT MAX LOAD A)
CN953
REMOTE MONITOR OUTPUT CONNECTOR (MONITOR B)
Monitor connection
+14dB AT 7.5KΩ
MAX DC 24V 1A
SPEAKER TERMINAL
JK852
SPEAKER JACK
OUTPUT TERMINAL (OUTPUT MAX LOAD B)

※ When using as bridge, the + side of the A CH speaker terminal become the hot side.

※ When using as bridge, the + side of the B CH speaker terminal become the cold side.


R333~336 2.7 3W
+Vcc1
OUT
-Vcc
E2
C311 0.1μ
R340 2.2
L301 1.2μH
C310 0.033μ 200V
R332 4.7 5W
R341 2.2
C312 0.1
D309: HZS6R-8EB2
CN903
REMOTE MONITOR OUTPUT CONNECTOR (MONITOR [A])
Monitor connection
1 H +4dB
2 E AT 7.5KΩ
3 MAX
4 DC 24V 1A
CN204
R270 2.2K 1W
R273 360
JK802
SPEAKER JACK
SPEAKER TERMINAL
OUTPUT TERMINAL (OUTPUT MAX LOAD [A])
※ When using as bridge, the + side of the [A] CH speaker terminal become the hot side.
CN205
AC IN
TH IN
-Vcc2
+Vcc2
D261 R271 220
47μ 100V
EM1Z
T1 POWER TRANSFORMER YWP1EE3E038
110V
120V
220V
D605,606,607,608: EM1Z
CN603
R333~336 2.7 3W
C1
C1-1 13000μ 80V
C1-2 13000μ 80V
D1
GND
D1: YW15D4B41
FUSE CIRCUIT BOARD
F1 8A
F2 8A
BLK
GRY
WHT
GRN
BRN
BLU
110V-1
120V-1
0V
10V
120V-2
SW1 POWER SWITCH
C2 0.033μ
C3 0.033μ
E5
SW2 (Set at 240V)
SW2 VOLTAGE SELECTOR SWITCH
AC110/120/220/240V 50/60Hz
C611 0.1μ
R640 2.2
L601 1.2μH
C610 0.033μ 200V
R632 4.7 5W
R641 2.2
C612 0.1μ
D609: HZS6R-8EB2
POWER SUPPLY CIRCUIT BOARD
CN701
R701 33 1W
R702 33 1W
D701 EM1
D702 EM1
D703
D704
C701 2200μ 16V
C702 2200μ 16V
C703 2200μ 16V
C704 2200μ 16V
D703,704: EM1Z
CN504
R570 2.2K 1W
R573 360
CN953
REMOTE MONITOR OUTPUT CONNECTOR (MONITOR [B])
Monitor connection
1 H +14dB
2 E AT 7.5KΩ
3 MAX
4 DC 24V 1A
CN505
-Vcc2
+Vcc2
SPEAKER TERMINAL
OUTPUT TERMINAL (OUTPUT MAX LOAD [B])
JK852
SPEAKER JACK
CN507
FAN
DC24V
DC FAN
2SC1567-QR
※ When using as bridge, the + side of the [B] CH speaker terminal become the cold side.

TA7317P


Power ON/ OFF Detect Circuit
Overcurrent Detect Circuit
DC Voltage Detect Circuit
Muting Circuit
OR Circuit
Discharge Circuit
Constant-voltage power supply circuit
Schmitt Circuit
Relay Drive Circuit
Substrate
①
②
③
④ GND
⑤
⑥
⑦
⑧
⑨
OUT
OUT

Notes :

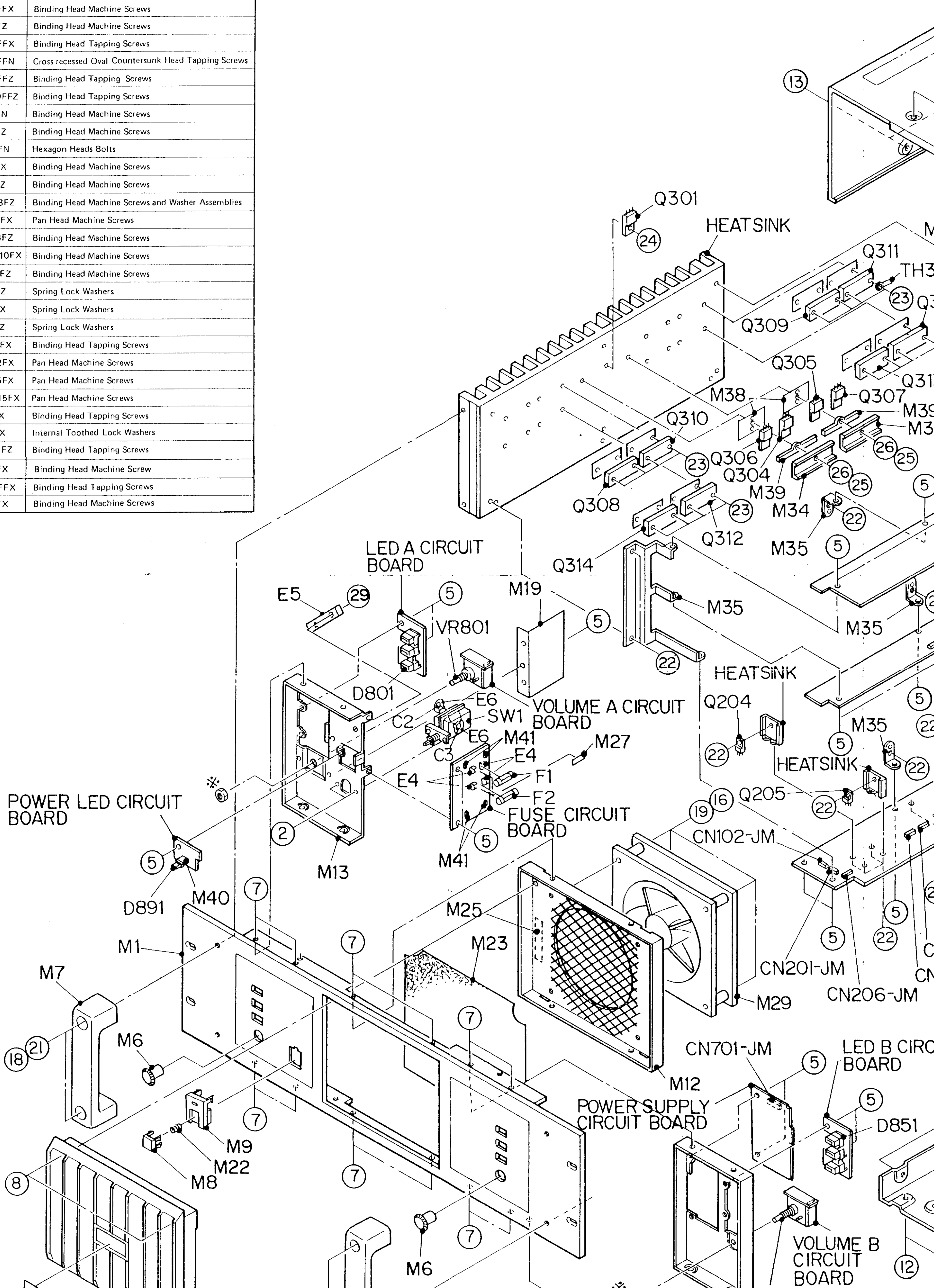
1. All resistor values are in ohms ¼W ± 5% unless otherwise specified. Ⓕ ......±1%
2. All capacitor values are in farads 50V unless otherwise specified.
3. The mark ⊗
4. The mark ◎ shows metal film.
5. The mark □ shows wirewound.
6. The mark ⊠ shows incombustible metal film.

12

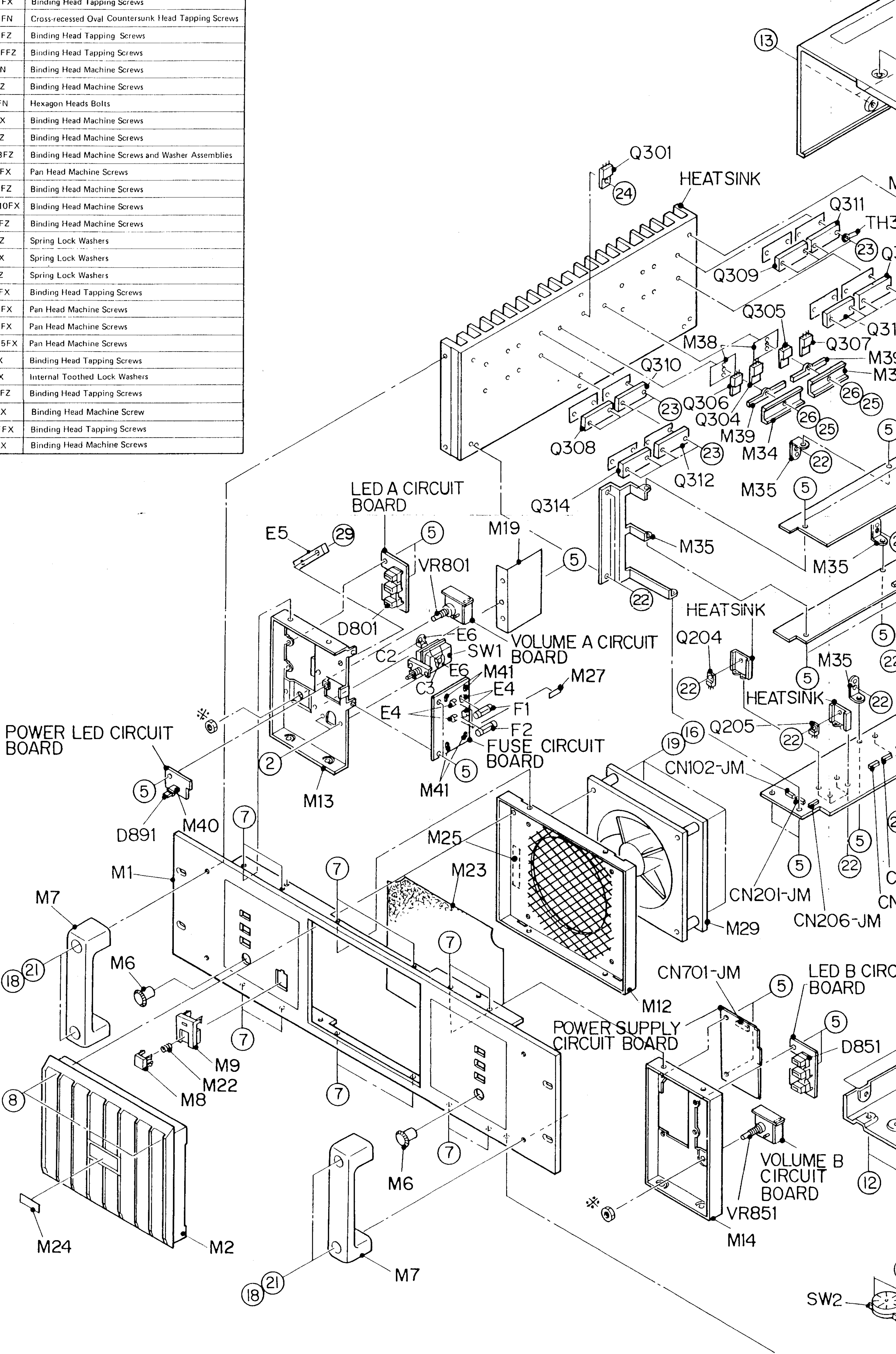
EXPL

○ Numbers Show Screws, Bolts and Washers.

No.	Screws	Discriptions
①	XSB2.6+4FX	Binding Head Machine Screws
②	XSB3+6FX	Binding Head Machine Screws
③	XSB3+6FFX	Binding Head Machine Screws
④	XSB3+6FZ	Binding Head Machine Screws
⑤	XTB3+6FFX	Binding Head Tapping Screws
⑥	XTC3+8FFN	Cross-recessed Oval Countersunk Head Tapping Screws
⑦	XTB3+8FFZ	Binding Head Tapping Screws
⑧	XTB3+20FFZ	Binding Head Tapping Screws
⑨	XSB4+6FN	Binding Head Machine Screws
⑩	XSB4+6FZ	Binding Head Machine Screws
⑪	XVE4B6FN	Hexagon Heads Bolts
⑫	XSB4+8FX	Binding Head Machine Screws
⑬	XSB4+8FZ	Binding Head Machine Screws
⑭	XYM4+E8FZ	Binding Head Machine Screws and Washer Assemblies
⑮	XSN4+12FX	Pan Head Machine Screws
⑯	XSB4+43FZ	Binding Head Machine Screws
⑰	XYN5+F10FX	Binding Head Machine Screws
⑱	XSB5+55FZ	Binding Head Machine Screws
⑲	XWA4AFZ	Spring Lock Washers
⑳	XWA5BFX	Spring Lock Washers
㉑	XWA5BFZ	Spring Lock Washers
㉒	XTB3+8JFX	Binding Head Tapping Screws
㉓	XYN3+12FX	Pan Head Machine Screws
㉔	XYN3+15FX	Pan Head Machine Screws
㉕	XYN3+C15FX	Pan Head Machine Screws
㉖	XYA3BFX	Binding Head Tapping Screws
㉗	XWC4AFX	Internal Toothed Lock Washers
㉘	XTB3+6FFZ	Binding Head Tapping Screws
㉙	XSB3+8FX	Binding Head Machine Screw
㉚	XTB3+4FFX	Binding Head Tapping Screws
㉛	XSB4+6FX	Binding Head Machine Screws

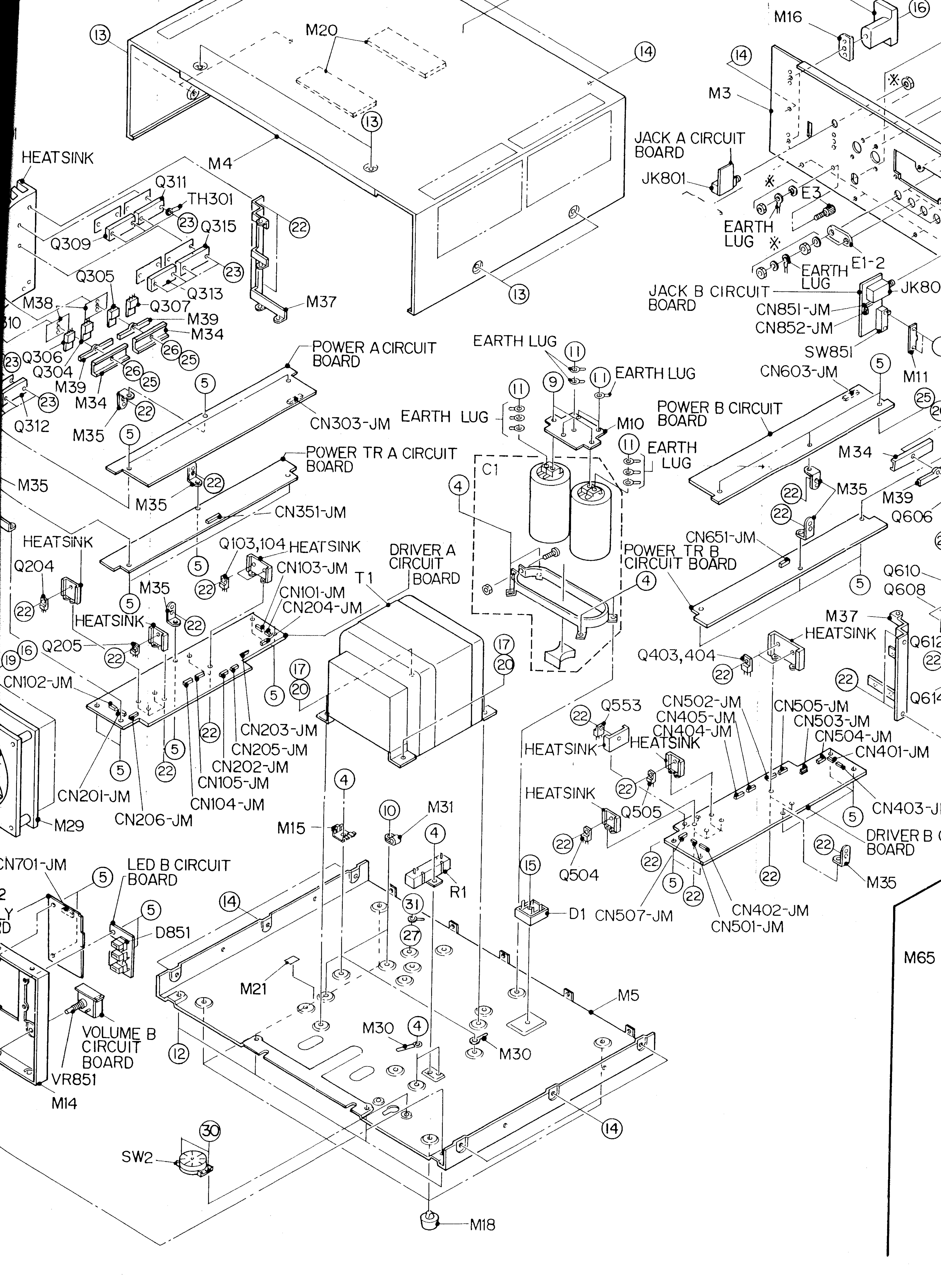

⑬
⑥
Q301
㉔
HEATSINK
Q311
TH3
㉓
Q309
Q305
Q307
M38
M39
M3
Q310
Q306
Q304
㉖
㉕
㉓
M39
M34
㉖
㉕
Q308
㉓
Q312
M35
㉒
⑤
Q314
LED A CIRCUIT BOARD
M35
⑤
E5
㉙
⑤
M19
⑤
M35
VR801
D801
HEATSINK
E6
VOLUME A CIRCUIT BOARD
Q204
C2
SW1
E6
M41
M27
C3
E4
㉒
M35
⑤
F1
E4
F2
HEATSINK
Q205
㉒
㉒
FUSE CIRCUIT BOARD
⑤
※
POWER LED CIRCUIT BOARD
②
⑲
⑯
CN102-JM
M13
M41
⑤
D891
M40
⑦
M25
M1
⑦
M23
⑤
㉒
M7
CN201-JM
CN206-JM
M29
⑦
㉑
⑱
M6
CN701-JM
LED B CIRC BOARD
⑤
M12
⑤
POWER SUPPLY CIRCUIT BOARD
D851
M9
⑦
M22
⑧
M8
⑦
⑦
M6
VOLUME B CIRCUIT BOARD
⑫

⑤	XTB3+6FFX	Binding Head Tapping Screws
⑥	XTC3+8FFN	Cross-recessed Oval Countersunk Head Tapping Screws
⑦	XTB3+8FFZ	Binding Head Tapping Screws
⑧	XTB3+20FFZ	Binding Head Tapping Screws
⑨	XSB4+6FN	Binding Head Machine Screws
⑩	XSB4+6FZ	Binding Head Machine Screws
⑪	XVE4B6FN	Hexagon Heads Bolts
⑫	XSB4+8FX	Binding Head Machine Screws
⑬	XSB4+8FZ	Binding Head Machine Screws
⑭	XYM4+E8FZ	Binding Head Machine Screws and Washer Assemblies
⑮	XSN4+12FX	Pan Head Machine Screws
⑯	XSB4+43FZ	Binding Head Machine Screws
⑰	XYN5+F10FX	Binding Head Machine Screws
⑱	XSB5+55FZ	Binding Head Machine Screws
⑲	XWA4AFZ	Spring Lock Washers
⑳	XWA5BFX	Spring Lock Washers
㉑	XWA5BFZ	Spring Lock Washers
㉒	XTB3+8JFX	Binding Head Tapping Screws
㉓	XYN3+12FX	Pan Head Machine Screws
㉔	XYN3+15FX	Pan Head Machine Screws
㉕	XYN3+C15FX	Pan Head Machine Screws
㉖	XYA3BFX	Binding Head Tapping Screws
㉗	XWC4AFX	Internal Toothed Lock Washers
㉘	XTB3+6FFZ	Binding Head Tapping Screws
㉙	XSB3+8FX	Binding Head Machine Screw
㉚	XTB3+4FFX	Binding Head Tapping Screws
㉛	XSB4+6FX	Binding Head Machine Screws

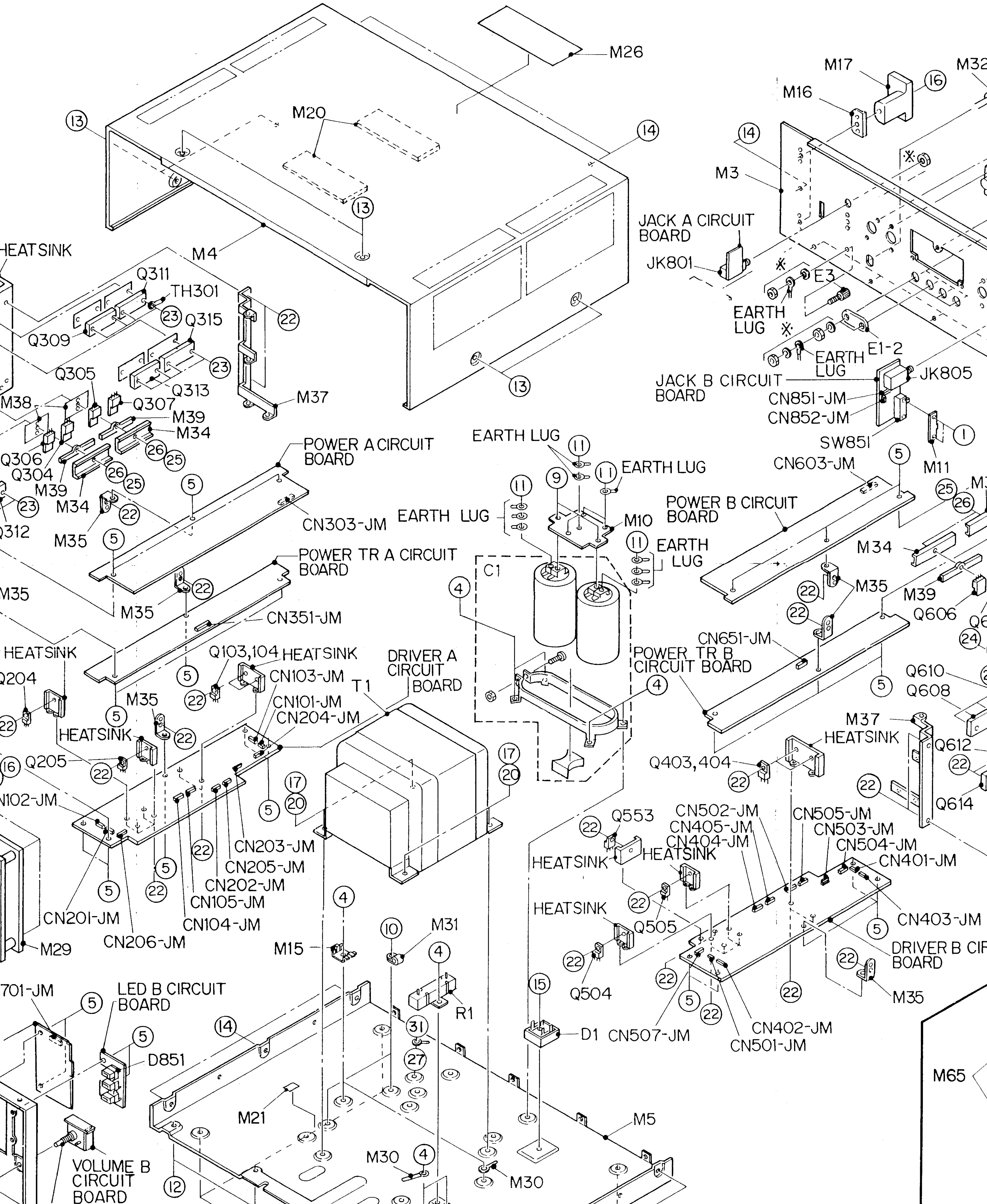

⑬
Q301
㉔
HEATSINK
Q311
TH3
㉓
Q309
Q305
Q307
M38
M39
M3
Q310
Q306
Q304
㉓
㉖
㉕
M39
M34
㉖
㉕
Q308
㉓
Q312
㉒
Q314
M35
⑤
LED A CIRCUIT BOARD
E5
㉙
⑤
M19
⑤
M35
M35
VR801
D801
E6
SW1
C2
VOLUME A CIRCUIT BOARD
HEATSINK
Q204
C3
E6
M41
E4
M27
E4
F1
F2
FUSE CIRCUIT BOARD
M35
HEATSINK
㉒
㉒
Q205
㉒
⑤
⑤
※
POWER LED CIRCUIT BOARD
②
⑲
⑯
CN102-JM
⑤
M41
M13
D891
M40
⑦
M1
M25
M23
⑦
⑤
㉒
CN201-JM
CN206-JM
M29
M7
⑦
㉑
⑱
M6
CN701-JM
⑤
LED B CIRC BOARD
M12
⑦
M9
M22
M8
POWER SUPPLY CIRCUIT BOARD
⑤
D851
⑧
⑦
⑦
M6
VOLUME B CIRCUIT BOARD
⑫
※
VR851
M24
M2
M14
M7
㉑
⑱
SW2

Note :
These nuts and washers come with respective jack, terminal, variable resistor,etc.

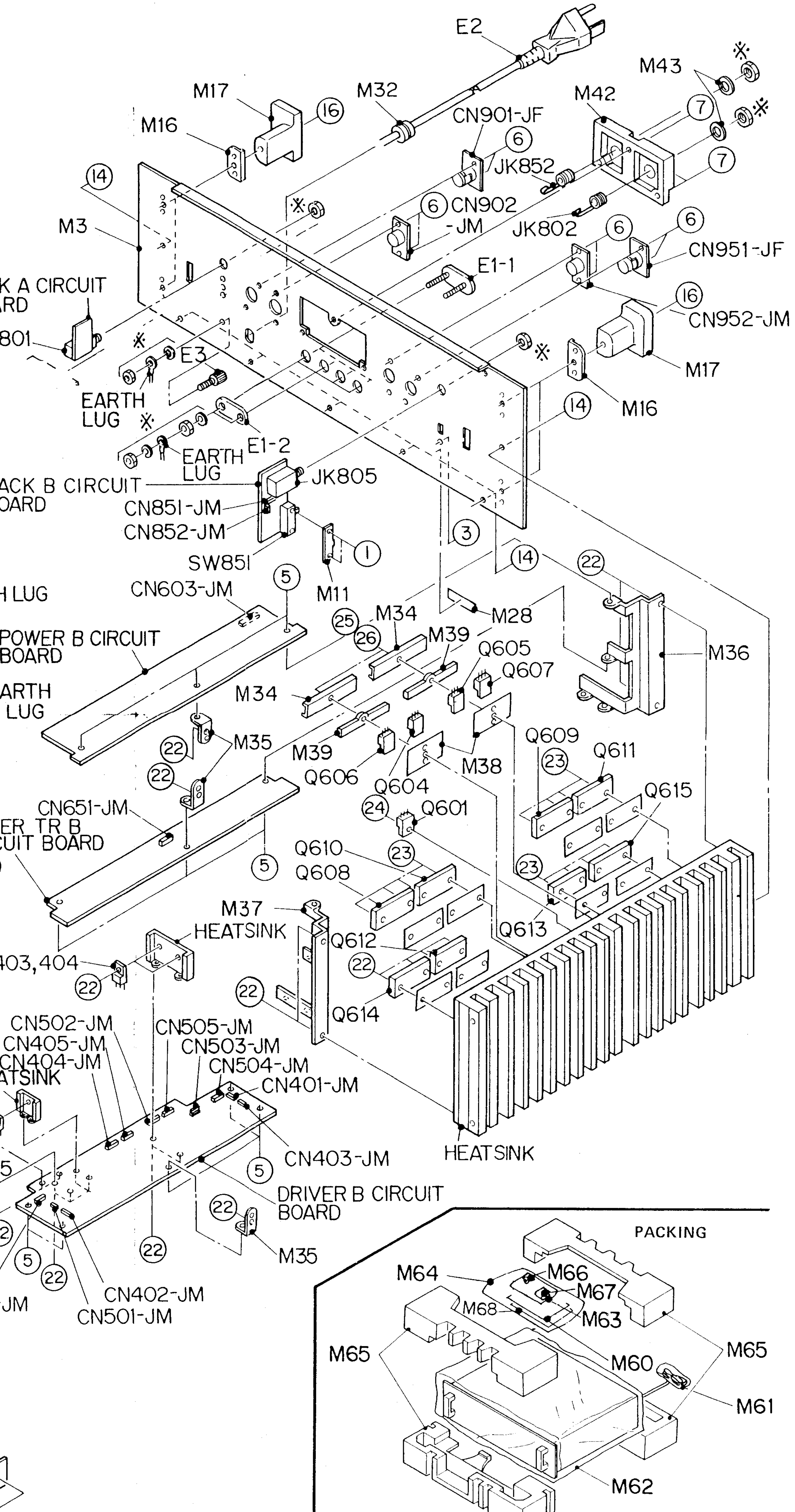
5

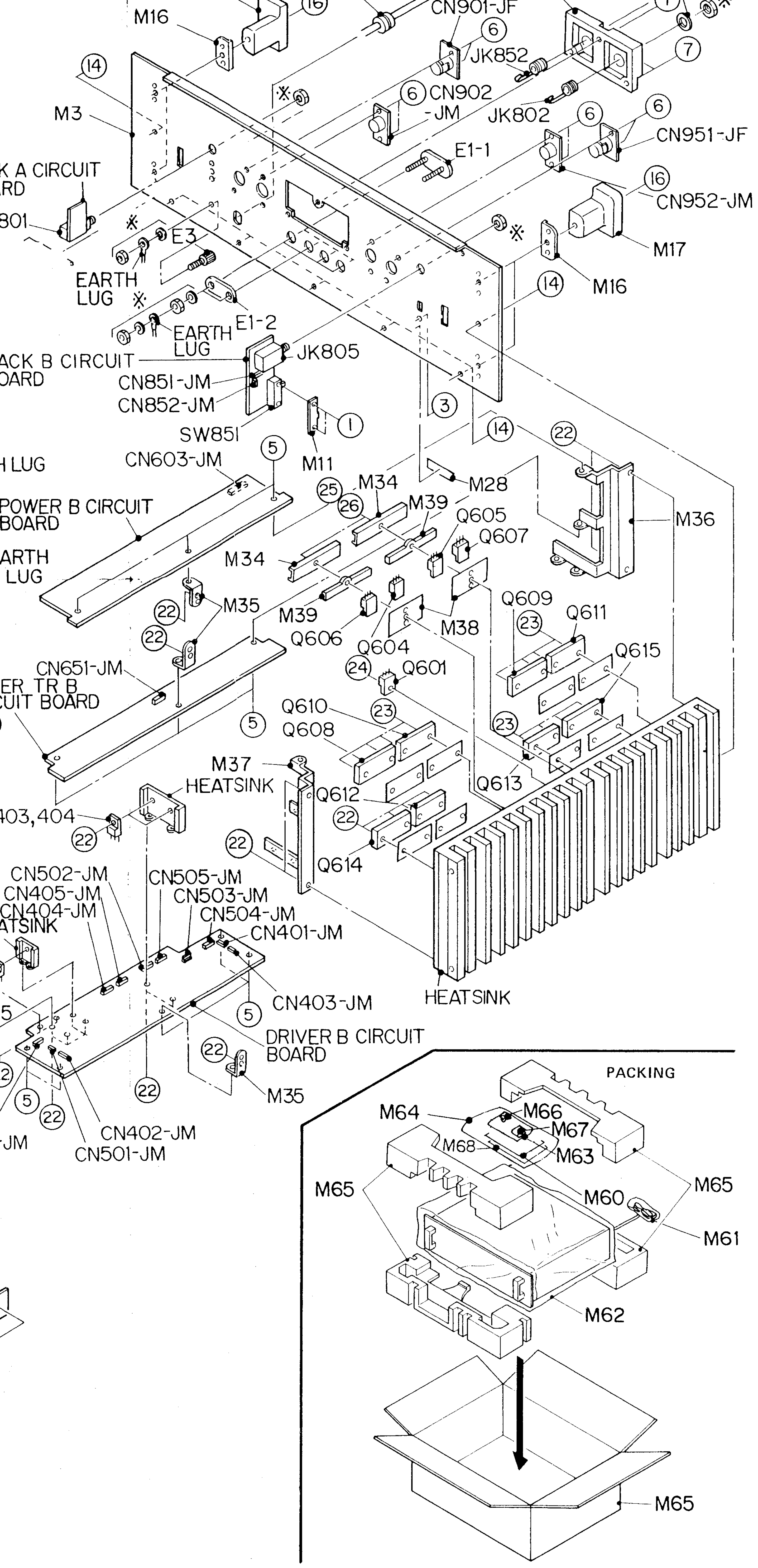

⑬
M20
⑭
M16
⑯
⑭
M3
※
⑬
HEATSINK
JACK A CIRCUIT BOARD
M4
JK801
※
E3
Q311
TH301
EARTH LUG
㉒
※
Q309
㉓
Q315
E1-2
EARTH LUG
㉓
Q305
Q313
⑬
JACK B CIRCUIT BOARD
JK80
M38
Q307
M37
CN851-JM
M39
CN852-JM
310
M34
SW851
㉖
EARTH LUG
㉓
Q306
㉕
⑪
Q304
POWER A CIRCUIT BOARD
⑪
EARTH LUG
M11
M39
㉖
⑨
CN603-JM
⑤
M34
㉕
⑤
⑪
POWER B CIRCUIT BOARD
㉓
M35
㉒
EARTH LUG
M10
㉕
Q312
CN303-JM
M35
⑤
⑪
EARTH LUG
POWER TR A CIRCUIT BOARD
C1
M34
M35
④
㉒
M35
㉒
M35
M35
CN351-JM
㉒
M39
Q606
HEATSINK
Q103,104
HEATSINK
DRIVER A CIRCUIT BOARD
CN651-JM
Q204
CN103-JM
POWER TR B CIRCUIT BOARD
⑤
T1
④
Q610
㉒
M35
CN101-JM
⑤
Q608
㉒
CN204-JM
⑤
HEATSINK
㉒
M37
HEATSINK
Q205
㉒
Q612
㉒
⑰
⑳
Q403,404
㉒
⑲
⑯
⑰
⑳
㉒
CN102-JM
⑤
㉒
Q614
CN203-JM
Q553
CN502-JM
CN505-JM
CN405-JM
CN503-JM
CN404-JM
CN504-JM
⑤
㉒
CN205-JM
HEATSINK
HEATSINK
CN401-JM
CN202-JM
⑤
㉒
CN105-JM
HEATSINK
㉒
CN201-JM
CN104-JM
Q505
CN403-J
CN206-JM
⑤
M29
④
⑩
M31
DRIVER B C BOARD
M15
④
㉒
㉒
CN701-JM
LED B CIRCUIT BOARD
⑤
R1
Q504
M35
⑮
⑭
㉒
⑤
㉒
D851
㉛
D1
CN507-JM
CN402-JM
CN501-JM
㉗
M65
M21
M5
VOLUME B CIRCUIT BOARD
M30
④
⑫
M30
VR851
M14
⑭
㉚
SW2
M18

EXPLODED VIEW/PACKING OF WP-9220E

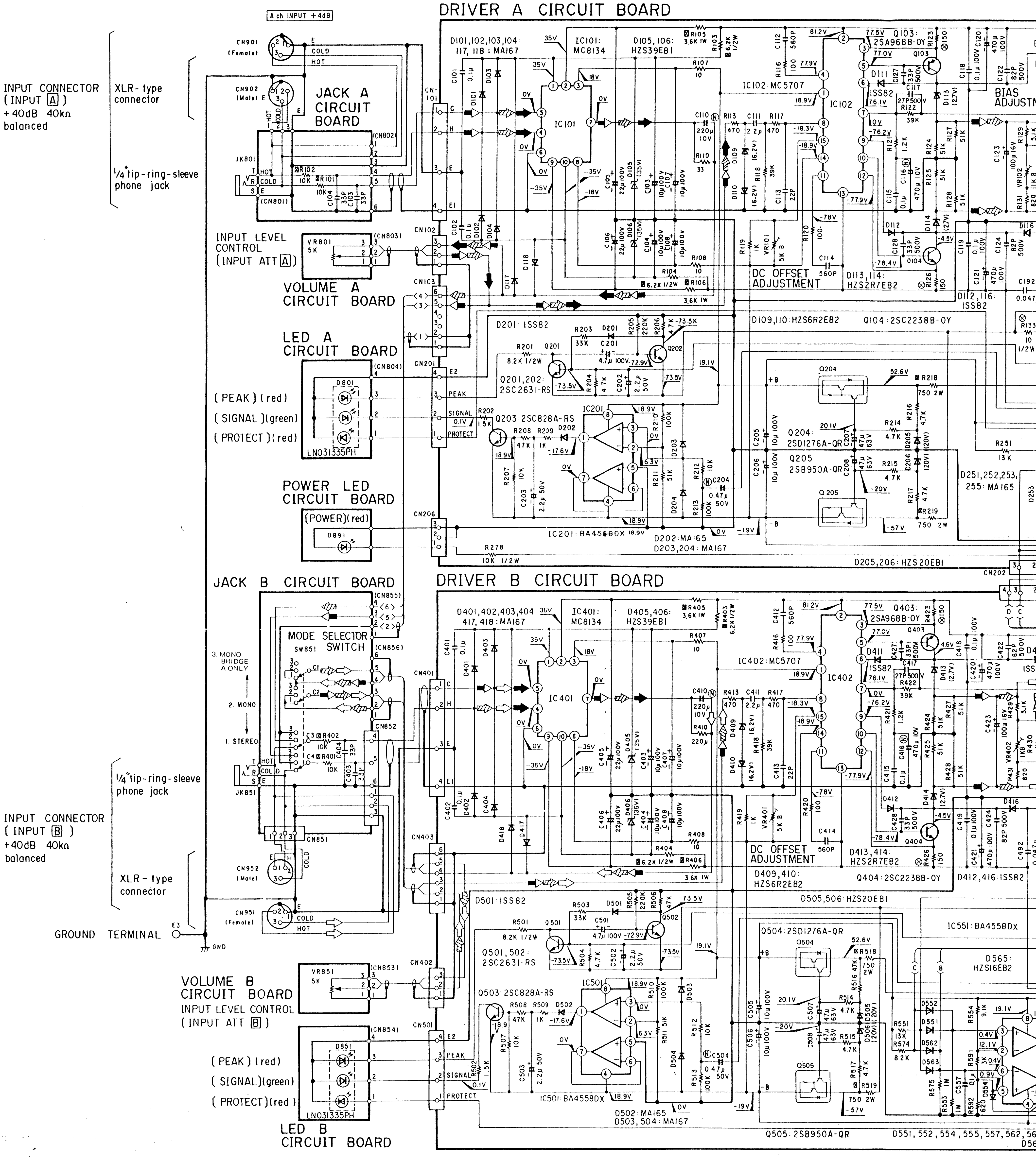


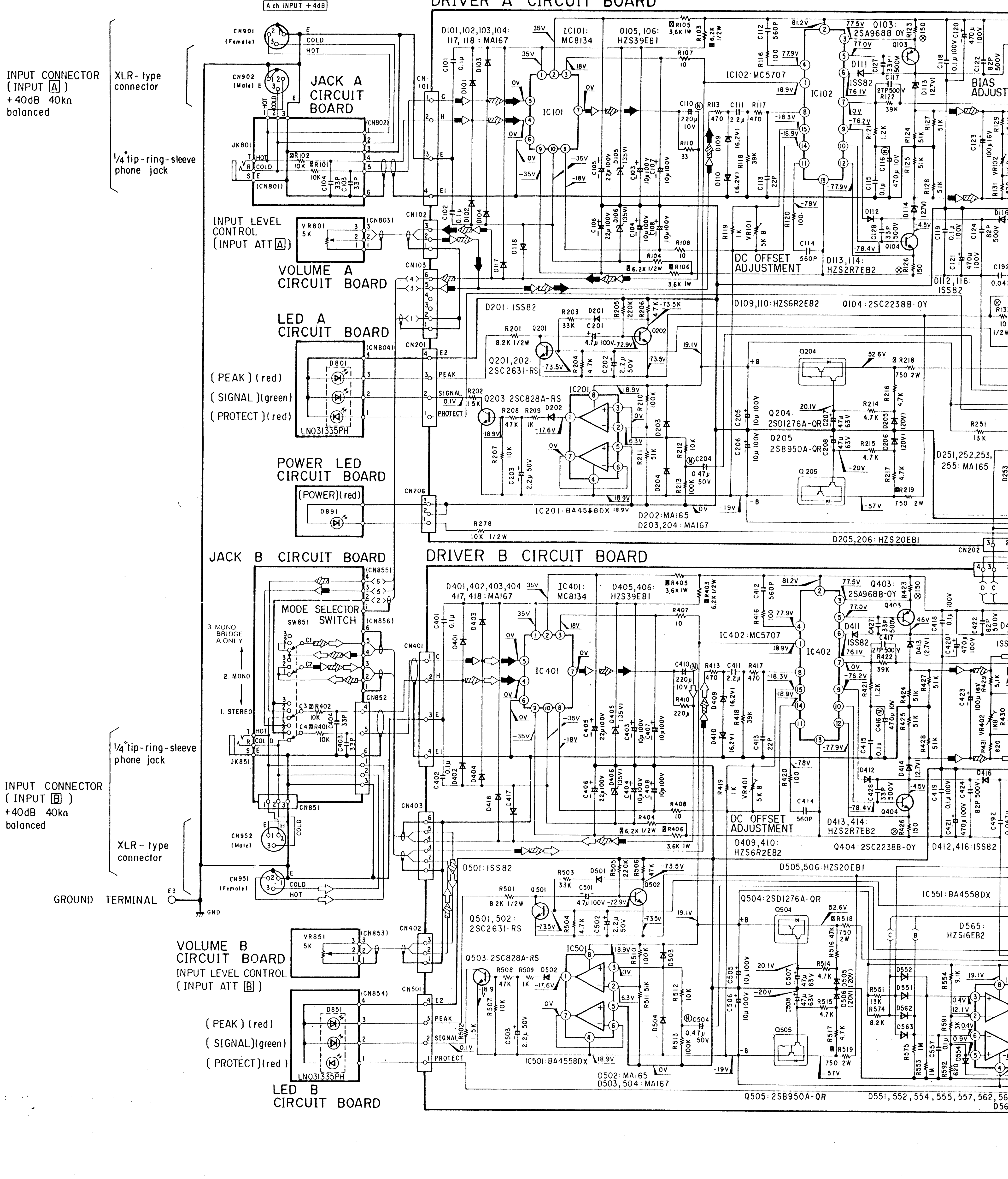
M26
M17
M32
M16
⑯
M20
⑬
⑭
M3
⑬
JACK A CIRCUIT BOARD
JK801
※
E3
HEATSINK
M4
Q311
TH301
EARTH LUG
※
E1-2
EARTH LUG
Q309
㉓
Q315
㉒
㉓
JACK B CIRCUIT BOARD
JK805
Q305
Q313
⑬
CN851-JM
CN852-JM
M38
Q307
M37
M39
M34
SW851
①
Q306
㉖
㉕
EARTH LUG
⑪
POWER A CIRCUIT BOARD
⑪
EARTH LUG
M11
Q304
⑨
CN603-JM
⑤
M39
㉖
㉕
⑤
⑪
POWER B CIRCUIT BOARD
㉕
㉖
M34
㉒
M10
EARTH LUG
Q312
M35
CN303-JM
M34
⑤
POWER TR A CIRCUIT BOARD
⑪
EARTH LUG
C1
M35
㉒
④
M39
M35
M35
㉒
CN351-JM
Q606
㉒
CN651-JM
㉔
HEATSINK
Q103,104
HEATSINK
DRIVER A CIRCUIT BOARD
POWER TR B CIRCUIT BOARD
Q204
CN103-JM
④
Q610
⑤
㉒
T1
Q608
㉒
M35
CN101-JM
CN204-JM
M37
HEATSINK
⑤
HEATSINK
Q612
㉒
Q205
⑰
⑳
Q403,404
㉒
⑯
⑰
⑳
㉒
㉒
Q614
CN102-JM
⑤
Q553
CN502-JM
CN505-JM
CN405-JM
CN503-JM
CN404-JM
CN504-JM
CN203-JM
HEATSINK
HEATSINK
CN401-JM
㉒
CN205-JM
⑤
CN202-JM
㉒
⑤
CN105-JM
④
㉒
HEATSINK
Q505
CN403-JM
CN201-JM
CN104-JM
⑩
M31
⑤
M29
CN206-JM
M15
④
㉒
DRIVER B CIRCUIT BOARD
Q504
㉒
701-JM
LED B CIRCUIT BOARD
⑮
R1
⑤
㉒
M35
⑤
⑤
㉒
⑭
D851
㉛
D1
CN507-JM
CN402-JM
CN501-JM
㉗
M65
M21
M5
VOLUME B CIRCUIT BOARD
M30
④
⑫
M30


E2
M43
※
M17
M32
M42
M16
⑯
CN901-JF
⑦
⑥
JK852
⑦
⑭
※
⑥
CN902
-JM
JK802
⑥
⑥
CN951-JF
M3
E1-1
K A CIRCUIT
ARD
⑯
CN952-JM
801
※
E3
※
M17
EARTH
LUG
※
M16
⑭
E1-2
EARTH
LUG
ACK B CIRCUIT
OARD
JK805
CN851-JM
CN852-JM
③
SW851
①
⑭
㉒
H LUG
CN603-JM
⑤
M11
M28
POWER B CIRCUIT
BOARD
㉕
M34
㉖
M39
Q605
M36
Q607
ARTH
LUG
M34
M35
㉒
M39
㉒
Q606
Q604
M38
Q609
Q611
㉓
Q615
CN651-JM
ER TR B
CUIT BOARD
㉔
Q601
⑤
Q610
㉓
Q608
㉓
M37
HEATSINK
Q612
Q613
03,404
㉒
㉒
㉒
Q614
CN502-JM
CN505-JM
CN405-JM
CN503-JM
CN404-JM
CN504-JM
ATSINK
CN401-JM
CN403-JM
HEATSINK
5
⑤
DRIVER B CIRCUIT
BOARD
㉒
M35
㉒
㉒
⑤
㉒
-JM
CN402-JM
CN501-JM
PACKING
M64
M66
M67
M68
M63
M65
M65
M60
M61
M62


M16
16
CN901-JF
7
6
JK852
7
14
M3
CN902
-JM
6
JK802
6
6
CN951-JF
K A CIRCUIT
RD
E1-1
801
16
CN952-JM
※
E3
※
M17
EARTH
LUG
※
M16
14
E1-2
EARTH
LUG
ACK B CIRCUIT
OARD
JK805
CN851-JM
CN852-JM
SW851
3
1
M11
14
22
H LUG
CN603-JM
5
POWER B CIRCUIT
BOARD
M34
M28
25
26
M39
Q605
Q607
M36
ARTH
LUG
M34
M35
22
M39
Q606
Q604
M38
Q609
Q611
23
22
CN651-JM
ER TR B
CUIT BOARD
24
Q601
Q615
5
Q610
23
Q608
23
M37
HEATSINK
Q613
403,404
22
Q612
22
22
Q614
CN502-JM
CN405-JM
CN404-JM
ATSINK
CN505-JM
CN503-JM
CN504-JM
CN401-JM
5
CN403-JM
HEATSINK
5
DRIVER B CIRCUIT
BOARD
22
22
M35
5
22
22
CN402-JM
-JM
CN501-JM
PACKING
M64
M66
M67
M68
M63
M65
M60
M65
M61
M62
M65

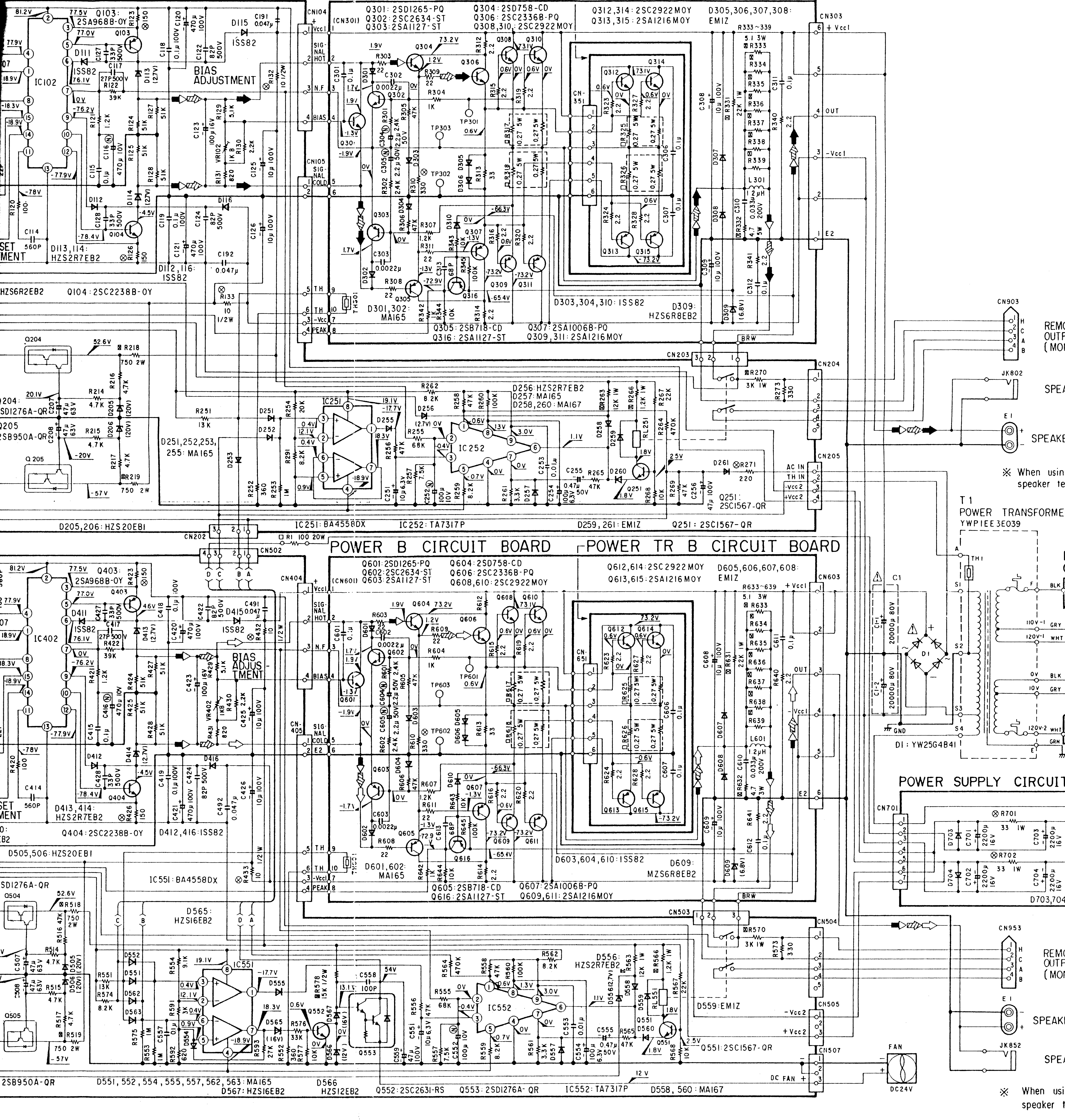
SCHEMATI


A ch INPUT +4dB
INPUT CONNECTOR
(INPUT A)
+40dB 40kΩ
balanced
XLR- type connector
1/4" tip-ring-sleeve phone jack
CN901 (Female)
CN902 (Male)
JK801
JACK A CIRCUIT BOARD
INPUT LEVEL CONTROL (INPUT ATT A)
VR801 5K
VOLUME A CIRCUIT BOARD
LED A CIRCUIT BOARD
(PEAK) (red)
(SIGNAL)(green)
(PROTECT)(red)
LN031335PH
POWER LED CIRCUIT BOARD
(POWER)(red)
D891
DRIVER A CIRCUIT BOARD
D101,102,103,104: 117, 118 : MA167
IC101: MC8134
D105, 106: HZS39EB1
IC102: MC5707
Q103: 2SA968B-OY
BIAS ADJUSTM
DC OFFSET ADJUSTMENT
D113,114: HZS2R7EB2
D109,110: HZS6R2EB2
Q104 : 2SC2238B-OY
D112,116: ISS82
D201: ISS82
Q201,202: 2SC2631-RS
Q203: 2SC828A-RS
IC201: BA4558DX
D202: MA165
D203,204: MA167
Q204: 2SD1276A-QR
Q205 2SB950A-QR
D205,206: HZS20EB1
D251,252,253, 255: MA165
R278 10K 1/2W
JACK B CIRCUIT BOARD
MODE SELECTOR SWITCH
SW851
3. MONO BRIDGE A ONLY
2. MONO
1. STEREO
JK851
1/4" tip-ring-sleeve phone jack
INPUT CONNECTOR
(INPUT B)
+40dB 40kΩ
balanced
XLR - type connector
CN952 (Male)
CN951 (Female)
GROUND TERMINAL
E3
GND
VOLUME B CIRCUIT BOARD
INPUT LEVEL CONTROL (INPUT ATT B)
VR851 5K
LED B CIRCUIT BOARD
(PEAK) (red)
(SIGNAL)(green)
(PROTECT)(red)
LN031335PH
DRIVER B CIRCUIT BOARD
D401,402,403,404 417, 418 : MA167
IC401: MC8134
D405,406: HZS39EB1
IC402: MC5707
Q403: 2SA968B-OY
DC OFFSET ADJUSTMENT
D413,414: HZS2R7EB2
D409,410: HZS6R2EB2
Q404: 2SC2238B-OY
D412,416 : ISS82
D501: ISS82
Q501,502: 2SC2631-RS
Q503: 2SC828A-RS
IC501: BA4558DX
D502: MA165
D503, 504: MA167
D505,506: HZS20EB1
Q504: 2SD1276A-QR
Q505: 2SB950A-QR
IC551: BA4558DX
D565: HZS16EB2
D551, 552, 554, 555, 557, 562, 56

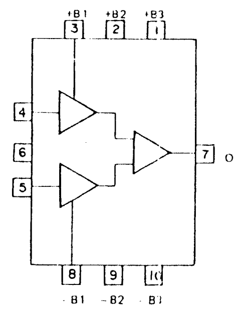

A ch INPUT +4dB
DRIVER A CIRCUIT BOARD
INPUT CONNECTOR (INPUT A) +40dB 40kΩ balanced
XLR-type connector
1/4" tip-ring-sleeve phone jack
CN901 (Female)
CN902 (Male)
JACK A CIRCUIT BOARD
JK801
INPUT LEVEL CONTROL (INPUT ATT A)
VR801 5K
VOLUME A CIRCUIT BOARD
LED A CIRCUIT BOARD
D801
(PEAK) (red)
(SIGNAL) (green)
(PROTECT) (red)
LN031335PH
POWER LED CIRCUIT BOARD
(POWER) (red)
D891
D101,102,103,104: 117,118: MA167
IC101: MC8134
D105,106: HZS39EB1
IC102: MC5707
Q103: 2SA968B-OY
BIAS ADJUST
DC OFFSET ADJUSTMENT
D113,114: HZS2R7EB2
D112,116: 1SS82
D109,110: HZS6R2EB2
Q104: 2SC2238B-OY
D201: 1SS82
Q201,202: 2SC2631-RS
Q203: 2SC828A-RS
IC201: BA4558DX
D202: MA165
D203,204: MA167
Q204: 2SD1276A-QR
Q205: 2SB950A-QR
D205,206: HZS20EB1
D251,252,253,255: MA165
JACK B CIRCUIT BOARD
DRIVER B CIRCUIT BOARD
MODE SELECTOR SWITCH
SW851
3. MONO BRIDGE A ONLY
2. MONO
1. STEREO
JK851
INPUT CONNECTOR (INPUT B) +40dB 40kΩ balanced
CN952 (Male)
CN951 (Female)
XLR-type connector
GROUND TERMINAL
E3
GND
VOLUME B CIRCUIT BOARD
INPUT LEVEL CONTROL (INPUT ATT B)
VR851 5K
LED B CIRCUIT BOARD
D851
LN031335PH
D401,402,403,404 417,418: MA167
IC401: MC8134
D405,406: HZS39EB1
IC402: MC5707
Q403: 2SA968B-OY
D413,414: HZS2R7EB2
D409,410: HZS6R2EB2
Q404: 2SC2238B-OY
D412,416: 1SS82
D501: 1SS82
Q501,502: 2SC2631-RS
Q503: 2SC828A-RS
IC501: BA4558DX
D502: MA165
D503,504: MA167
D505,506: HZS20EB1
Q504: 2SD1276A-QR
Q505: 2SB950A-QR
IC551: BA4558DX
D565: HZS16EB2

< SIGNAL CHART >

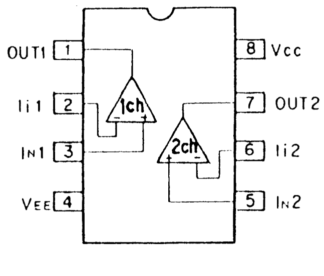
- ➡ Ach Input Signal
- ▨ Monoral Input Signal
- ■▷ Mono Bridge Input Signal
- ⇨ Bch Input Signal


BIAS ADJUSTMENT
Q301: 2SD1265-PQ
Q302: 2SC2634-ST
Q303: 2SA1127-ST
Q304: 2SD758-CD
Q306: 2SC2336B-PQ
Q308,310: 2SC2922MOY
Q312,314: 2SC2922MOY
Q313,315: 2SA1216MOY
D305,306,307,308: EMIZ
D303,304,310: 1SS82
D309: HZS6R8EB2
D301,302: MA165
Q305: 2SB718-CD
Q316: 2SA1127-ST
Q307: 2SA1006B-PQ
Q309,311: 2SA1216MOY
Q104: 2SC2238B-OY
D113,114: HZS2R7EB2
D112,116: 1SS82
IC251: BA4558DX
IC252: TA7317P
D256: HZS2R7EB2
D257: MA165
D258,260: MA167
D251,252,253,255: MA165
D205,206: HZS20EB1
D259,261: EMIZ
Q251: 2SC1567-QR
POWER B CIRCUIT BOARD
POWER TR B CIRCUIT BOARD
Q601: 2SD1265-PQ
Q602: 2SC2634-ST
Q603: 2SA1127-ST
Q604: 2SD758-CD
Q606: 2SC2336B-PQ
Q608,610: 2SC2922MOY
Q612,614: 2SC2922MOY
Q613,615: 2SA1216MOY
D605,606,607,608: EMIZ
D603,604,610: 1SS82
D609: MZS6R8EB2
D601,602: MA165
Q605: 2SB718-CD
Q616: 2SA1127-ST
Q607: 2SA1006B-PQ
Q609,611: 2SA1216MOY
Q404: 2SC2238B-OY
D413,414: HZS2R7EB2
D412,416: 1SS82
D505,506: HZS20EB1
IC551: BA4558DX
D565: HZS16EB2
D551,552,554,555,557,562,563: MA165
D567: HZS16EB2
D566: HZS12EB2
Q552: 2SC2631-RS
Q553: 2SD1276A-QR
IC552: TA7317P
D558,560: MA167
D556: HZS2R7EB2
D559: EMIZ
Q551: 2SC1567-QR
T1
POWER TRANSFORMER
YWP1EE3E039
DI: YW25G4B41
POWER SUPPLY CIRCUIT
SPEAKER
FAN
DC24V
DC FAN
REMO OUTP (MO
※ When usin speaker te

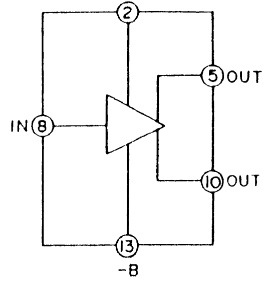
MC8134


+B1
+B2
+B3
IN C
GND
IN H
OUT
-B1
-B2
-B1

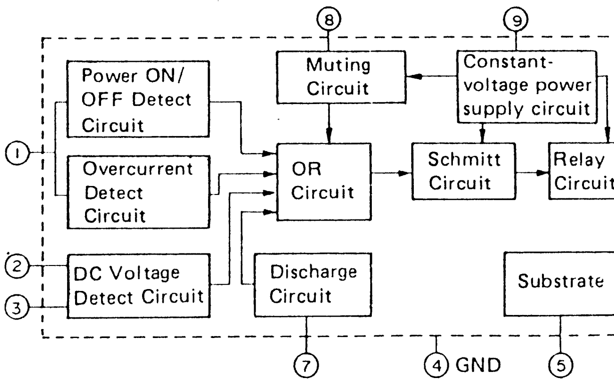
BA4558DX
NJM4560DX


OUT1
Ii1
In1
VEE
Vcc
OUT2
Ii2
In2
1ch
2ch

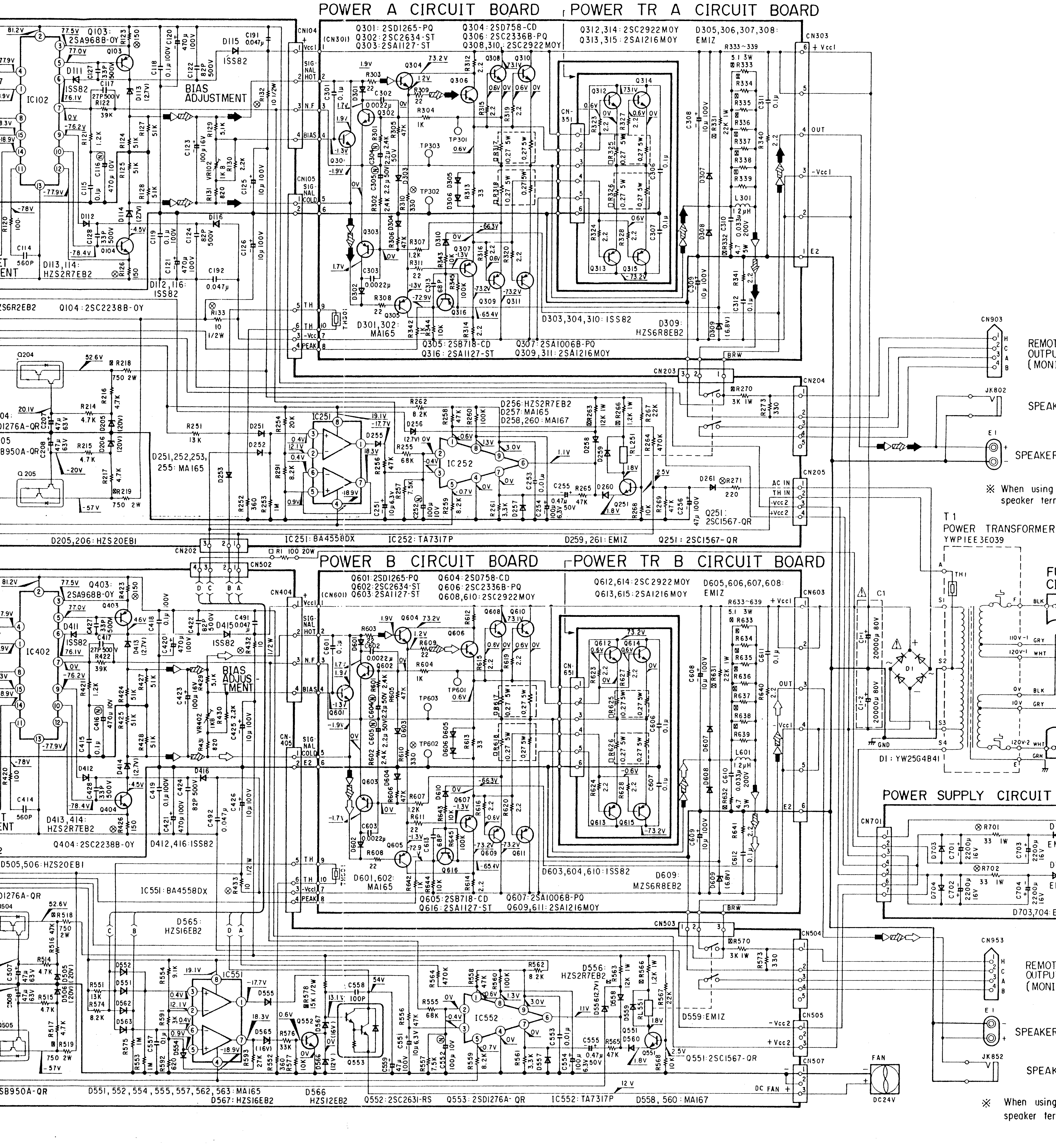
MC5707

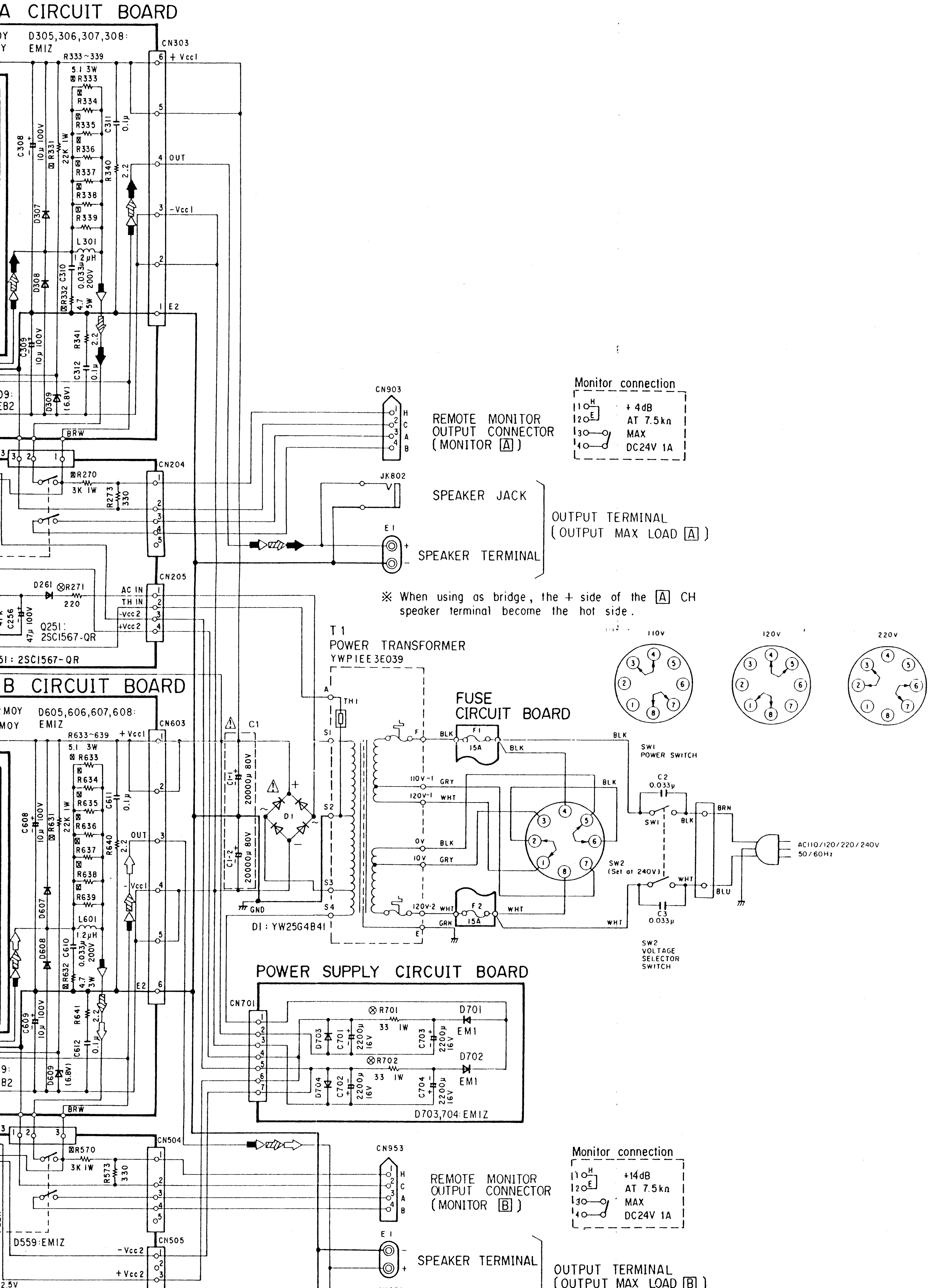

+B
IN
OUT
OUT
-B

TA7317P


Power ON/OFF Detect Circuit
Muting Circuit
Constant-voltage power supply circuit
Overcurrent Detect Circuit
OR Circuit
Schmitt Circuit
Relay Circuit
DC Voltage Detect Circuit
Discharge Circuit
Substrate
GND

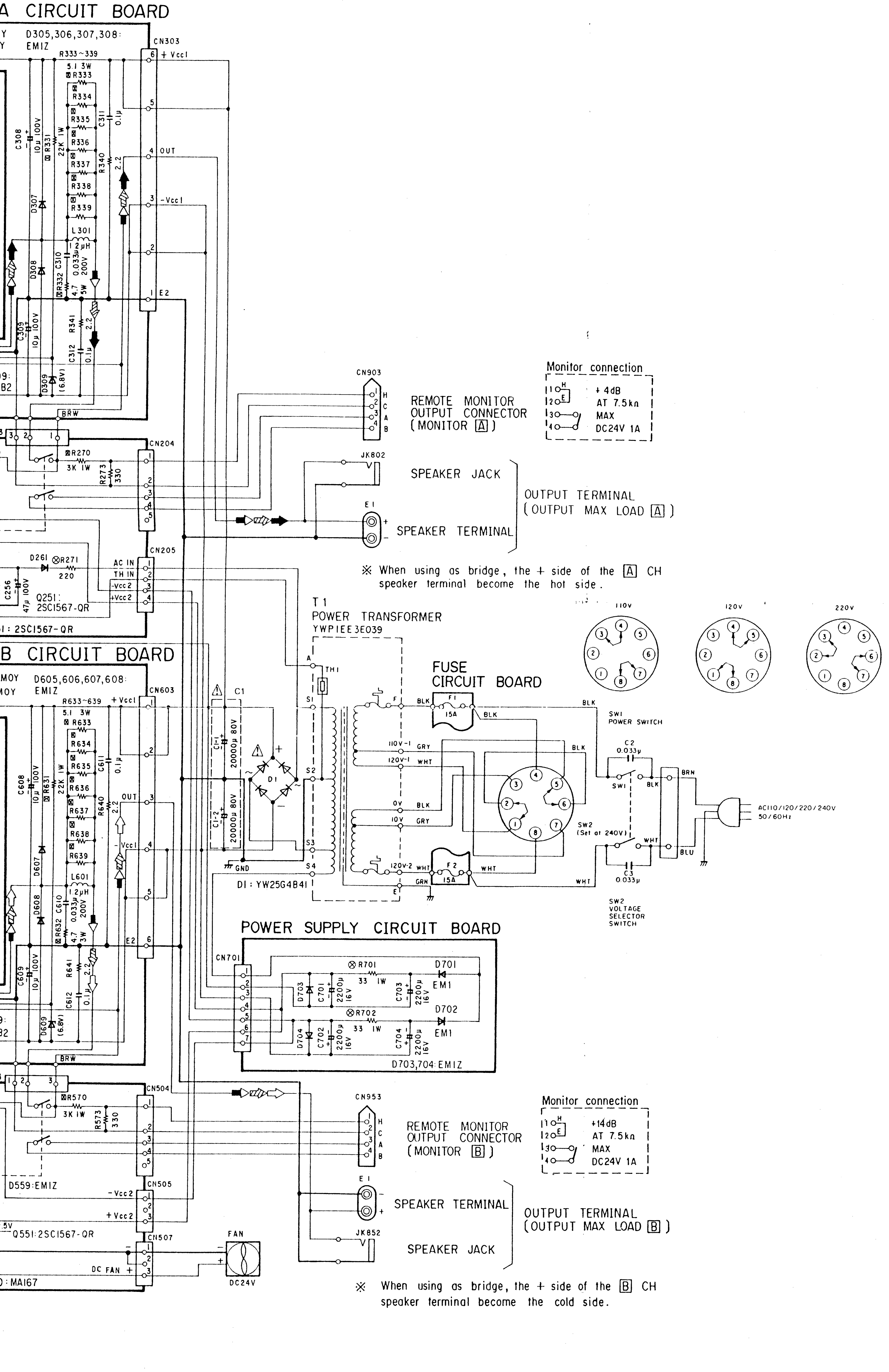
SCHEMATIC DIAGRAM OF WP-9220E


POWER A CIRCUIT BOARD
POWER TR A CIRCUIT BOARD
Q301: 2SD1265-PQ
Q302: 2SC2634-ST
Q303: 2SA1127-ST
Q304: 2SD758-CD
Q306: 2SC2336B-PQ
Q308,310: 2SC2922MOY
Q312,314: 2SC2922MOY
Q313,315: 2SA1216MOY
D305,306,307,308: EM1Z
D303,304,310: 1SS82
D309: HZS6R8EB2
D301,302: MA165
Q305: 2SB718-CD
Q316: 2SA1127-ST
Q307: 2SA1006B-PQ
Q309,311: 2SA1216MOY
BIAS ADJUSTMENT
IC102
Q103: 2SA968B-OY
Q104: 2SC2238B-OY
D113,114: HZS2R7EB2
D112,116: 1SS82
D256: HZS2R7EB2
D257: MA165
D258,260: MA167
D251,252,253,255: MA165
IC251: BA4558DX
IC252: TA7317P
D259,261: EM1Z
Q251: 2SC1567-QR
D205,206: HZS20EB1
POWER B CIRCUIT BOARD
POWER TR B CIRCUIT BOARD
Q601: 2SD1265-PQ
Q602: 2SC2634-ST
Q603: 2SA1127-ST
Q604: 2SD758-CD
Q606: 2SC2336B-PQ
Q608,610: 2SC2922MOY
Q612,614: 2SC2922MOY
Q613,615: 2SA1216MOY
D605,606,607,608: EM1Z
D603,604,610: 1SS82
D609: MZS6R8EB2
D601,602: MA165
Q605: 2SB718-CD
Q616: 2SA1127-ST
Q607: 2SA1006B-PQ
Q609,611: 2SA1216MOY
IC402
Q403: 2SA968B-OY
Q404: 2SC2238B-OY
D413,414: HZS2R7EB2
D412,416: 1SS82
D505,506: HZS20EB1
IC551: BA4558DX
D565: HZS16EB2
D556: HZS2R7EB2
D559: EM1Z
Q551: 2SC1567-QR
D551,552,554,555,557,562,563: MA165
D567: HZS16EB2
D566: HZS12EB2
Q552: 2SC2631-RS
Q553: 2SD1276A-QR
IC552: TA7317P
D558,560: MA167
T1 POWER TRANSFORMER
YWP1EE3E039
DI: YW25G4B41
POWER SUPPLY CIRCUIT
FAN
DC24V
DC FAN
REMOTE OUTPUT (MONI
SPEAKER
※ When using speaker term
CN303
CN104
CN105
CN203
CN204
CN205
CN202
CN502
CN404
CN405
CN603
CN503
CN504
CN505
CN507
CN701
CN903
CN953
JK802
JK852


A CIRCUIT BOARD
D305,306,307,308: EMIZ
R333~339
5.1 3W
CN303
+Vcc1
OUT
-Vcc1
E2
C308 10μ 100V
R331 22K 1W
R333
R334
R335
R336
R337
R338
R339
C311 0.1μ
R340 2.2
D307
L301 1.2μH
C310 0.033μ 200V
D308
R332 4.7 5W
C309 10μ 100V
R341 2.2
C312 0.1μ
D309 (6.8V)
BRW
CN204
R270 3K 1W
R273 330
CN205
D261
R271 220
AC IN
TH IN
-Vcc2
+Vcc2
C256 47μ 100V
Q251: 2SC1567-QR
B CIRCUIT BOARD
D605,606,607,608: EMIZ
CN603
R633~639
5.1 3W
R633
R634
R635
R636
R637
R638
R639
C608 10μ 100V
R631 22K 1W
C611 0.1μ
R640 2.2
D607
L601 1.2μH
C610 0.033μ 200V
D608
R632 4.7 3W
C609 10μ 100V
R641 2.2
C612 0.1μ
D609 (6.8V)
BRW
CN504
R570 3K 1W
R573 330
D559: EMIZ
CN505
-Vcc2
+Vcc2
Q551: 2SC1567-QR
CN507
DC FAN +
MA167
FAN
DC24V
CN903
H
C
A
B
REMOTE MONITOR OUTPUT CONNECTOR (MONITOR A)
Monitor connection
+4dB
AT 7.5kΩ
MAX
DC24V 1A
JK802
SPEAKER JACK
E1
SPEAKER TERMINAL
OUTPUT TERMINAL (OUTPUT MAX LOAD A)
T1 POWER TRANSFORMER YWP1EE3E039
TH1
S1
S2
S3
S4
GND
C1
C1-1 20000μ 80V
C1-2 20000μ 80V
D1
D1: YW25G4B41
FUSE CIRCUIT BOARD
F1 15A
F2 15A
BLK
GRY
WHT
GRN
110V-1
120V-1
0V
10V
120V-2
E
F
SW1 POWER SWITCH
C2 0.033μ
C3 0.033μ
SW2 (Set at 240V)
SW2 VOLTAGE SELECTOR SWITCH
BRN
BLU
AC110/120/220/240V 50/60Hz
110V
120V
220V
POWER SUPPLY CIRCUIT BOARD
CN701
R701 33 1W
R702 33 1W
D701 EM1
D702 EM1
D703
D704
C701 2200μ 16V
C702 2200μ 16V
C703 2200μ 16V
C704 2200μ 16V
D703,704: EMIZ
CN953
REMOTE MONITOR OUTPUT CONNECTOR (MONITOR B)
Monitor connection
+14dB
AT 7.5kΩ
MAX
DC24V 1A
E1
SPEAKER TERMINAL
OUTPUT TERMINAL (OUTPUT MAX LOAD B)
JK852
SPEAKER JACK

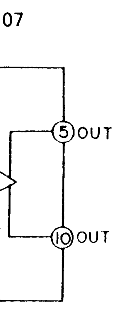
※ When using as bridge, the + side of the A CH speaker terminal become the hot side.

※ When using as bridge, the + side of the B CH speaker terminal become the cold side.

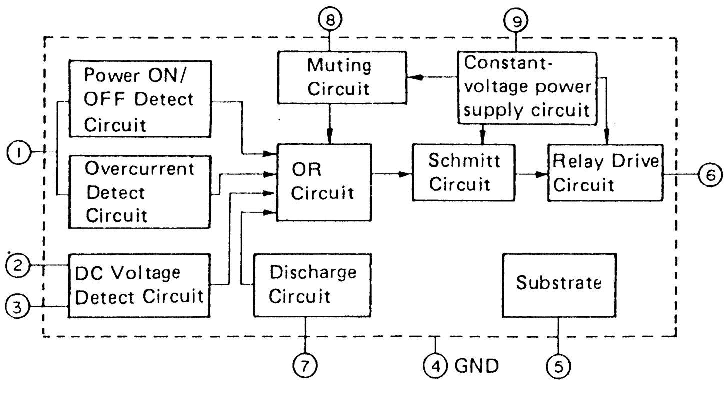

A CIRCUIT BOARD
D305,306,307,308: EMIZ
CN303
+Vcc1
OUT
-Vcc1
E2
R333~339 5.1 3W
R333
R334
R335
R336
R337
R338
R339
R340 2.2
C311 0.1μ
C308 10μ 100V
R331 22K 1W
D307
D308
L301 1.2μH
C310 0.033μ 200V
R332 4.7 5W
R341 2.2
C309 10μ 100V
C312 0.1μ
D309 (6.8V)
BRW
CN204
R270 3K 1W
R273 330
CN205
AC IN
TH IN
-Vcc2
+Vcc2
D261
R271 220
C256 47μ 100V
Q251: 2SC1567-QR
CN903
REMOTE MONITOR OUTPUT CONNECTOR (MONITOR A)
Monitor connection
H
E
+4dB AT 7.5kΩ MAX
DC24V 1A
JK802
SPEAKER JACK
E1
SPEAKER TERMINAL
OUTPUT TERMINAL (OUTPUT MAX LOAD A)
T1 POWER TRANSFORMER YWP1EE3E039
TH1
S1
S2
S3
S4
C1
C1-1 20000μ 80V
C1-2 20000μ 80V
D1
GND
D1: YW25G4B41
FUSE CIRCUIT BOARD
F1 15A
F2 15A
BLK
GRY
WHT
GRN
110V-1
120V-1
0V
10V
120V-2
SW1 POWER SWITCH
C2 0.033μ
C3 0.033μ
SW2 (Set at 240V)
SW2 VOLTAGE SELECTOR SWITCH
BRN
BLU
AC110/120/220/240V 50/60Hz
110V
120V
220V
B CIRCUIT BOARD
D605,606,607,608: EMIZ
CN603
R633~639 5.1 3W
R633
R634
R635
R636
R637
R638
R639
R640 2.2
C611 0.1μ
C608 10μ 100V
R631 22K 1W
D607
D608
L601 1.2μH
C610 0.033μ 200V
R632 4.7 3W
R641 2.2
C609 10μ 100V
C612 0.1μ
D609 (6.8V)
POWER SUPPLY CIRCUIT BOARD
CN701
R701 33 1W
R702 33 1W
D701 EM1
D702 EM1
D703
D704
C701 2200μ 16V
C702 2200μ 16V
C703 2200μ 16V
C704 2200μ 16V
D703,704: EMIZ
CN504
R570 3K 1W
R573 330
CN953
REMOTE MONITOR OUTPUT CONNECTOR (MONITOR B)
Monitor connection
+14dB AT 7.5kΩ MAX
DC24V 1A
D559: EMIZ
CN505
-Vcc2
+Vcc2
Q551: 2SC1567-QR
CN507
FAN
DC FAN
DC24V
JK852
SPEAKER TERMINAL
SPEAKER JACK
OUTPUT TERMINAL (OUTPUT MAX LOAD B)
: MA167

※ When using as bridge, the + side of the A CH speaker terminal become the hot side.

※ When using as bridge, the + side of the B CH speaker terminal become the cold side.


07
⑤OUT
⑩OUT

TA7317P


⑧
⑨
Power ON/OFF Detect Circuit
Overcurrent Detect Circuit
Muting Circuit
Constant-voltage power supply circuit
OR Circuit
Schmitt Circuit
Relay Drive Circuit
DC Voltage Detect Circuit
Discharge Circuit
Substrate
①
②
③
⑥
⑦
④ GND
⑤

Notes :

1. All resistor values are in ohms ¼W ± 5% unless otherwise specified. Ⓕ ......±1%
2. All capacitor values are in farads 50V unless otherwise specified.
3. The mark ⊗
4. The mark ◎ shows metal film.
5. The mark □ shows wirewound.
6. The mark ⊠ shows incombustible metal film.

REPLACEMENT PARTS LIST

Important Notice

- Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.
- Components identified by * mark are new parts used from this model.

SYMBOL NO.	PART NO.	PART CODE	DESCRIPTION
WP-9110E			
MISCELLANEOUS			
Q307,607	2SA1006B-PQ	001 030 0196 7	Transistor (x2)
Q309,311, 609,611	2SA1216M0Y	001 030 4856 8	Transistor (x4)
Q305,605	2SB718-CD	001 030 5873 3	Transistor (x2)
Q306,606	2SC2336B-PQ	001 030 1275 5	Transistor (x2)
Q308,310, 608,610	2SC2922M0Y	001 030 4857 7	Transistor (x4)
Q301,601	2SD1265-PQ	001 030 4860 2	Transistor (x2)
Q304,604	2SD758-CD	001 030 5874 2	Transistor (x2)
TH301,601 ⚠	YWTH487BF471	001 191 0642 8	Thermistor (x2)
TH1 ⚠	ERPF3B2M101A	001 241 0347 5	Thermistor
C1 ⚠	YWL0B80V133P	060 990 1444 1	Electrolytic
C2,3	ECQU2A333MN		Plastic 0.033uF 100V (x2)
T1 ⚠	YWPIEE3E038	001 202	Power transformer
SW1 ⚠	ESB99887V	003 435 5111 9	Push switch
SW2	ESE37202	003 439 0700 4	Switch, voltage select
F1,2 ⚠	XBA2E80NS1	002 380 1217 6	Current fuse 125V 8A (x2)
D1 ⚠	YW15D4B41	001 032 8470 6	Recetifier
R1 ⚠	ERF20HMJ101	001 150 0297 4	Wirewound 100Ω 2W
JK802,852	YW2506AJ3	003 400 4518 7	Jack (x2)
CN901,951-JF	YWWAKA331AL	003 403 3792 0	XLR type connecton (x2)
CN902,952-JM	YWWAKA3-32	003 403 1869 4	XLR type connector (x2)
E1 ⚠	YWAACA0002A4	003 490 5172 5	Power cord, AC
E2	YWTN040A	003 410 7677 5	Terminal (x2)
E3	YWUB0029	003 410 3351 0	Terminal, GND
E5	YWM20016P2U	003 410 4265 3	2 Pin terminal
E6	YW820731	060 600 1605 7	Capacitor cover (x2)
M1 *	YWA5WA0563D1	060 840 3199 4	Panel, front
M2 *	YWA5WC0565A2	060 840 3088 0	Panel, grille, ventilation opening
M3 *	YWA5WC0564A2	060 840 3270 4	Panel, rear
M4 *	YWA5EA0296B2	060 845 1018 7	Cover, upper
M5 *	YWA2KB0256A1		Chassis
M6	YWA5RA0127A3	060 700 0991 1	Knob, volume (x2)
M7 *	YWA6AA0011A3	060 705 0121 4	Handle (x2)
M8	YWA6JA0009A3	060 702 0089 2	Button, power switch
M9	YWA6JA0027A2	060 702 0140 6	Button, power switch guard
M10 *	YWA2QA0059C4	003 413 1511 5	Earth lug
M11	YWA2SA0672C4	060 632 4665 5	Mounting angle, slide switch
M12 *	YWA2SA0792A3	060 632 4533 6	Mounting angle, fan angle
M13 *	YWA2SA0793B3	060 632 4651 1	Mounting angle, power switch A
M14 *	YWA2SA0794B3	060 632 4652 0	Mounting angle
M15 *	YWA2SA0805B4	060 632 4642 2	Mounting angle, fixing PCB (x2)
M16 *	YWA3BA0043A4	060 632 4499 1	Reinforcement (x4)
M17 *	YWA5LA0027C4	060 828 0160 3	Rubber foot, rear (x4)
M18	YWFF-001	060 828 0128 3	Rubber foot (x4)
M19 *	YWA2HA0215A4	060 601 0453 4	Shield parts, power switch
M20	YWA2SA0936A4	060 324 7527 1	Mounting angle, fan
M21	YWA7SA0689A4	060 862 2167 4	Label, ground
M22 *	YWA2PA0156A4	060 600 1624 4	Insulator, transformer (x2)
M23	YWA4JA0115A4	060 726 0434 3	Spring, power switch
M24	YWA3AA0071B4	060 612 0384 9	Dust proof parts, fan filter
M25 *	YWA7QB0885A4	060 861 5765 1	Label, main
M26	YWA7SA0443A4	060 862 1814 0	Label, fuse caution
M27	YWA7SA0686A4	060 862 2167 4	Label, caution
M28	YWA7SA0679A4	060 862 2155 6	Label, fuse (x2)
M29	YWV240PUB01E	060 862 1186 5	Label, serial No.
M30	FBH08A24HZA	007 570 1736 0	Fan 24V DC 0.18A
M31	YWCS4	060 645 0205 4	Cord clamp (x5)
M32	YWNK5N	060 645 0195 9	Cord clamp (x2)
M33	YWSR6W-1	060 645 0047 0	Cord clamp
M35	YWA2SA0673A4	060 632 4532 7	Mounting angle, fixing TR (x4)
M36 *	YWA2SA0795B4	060 632 4635 1	Mounting angle, A (x2)
M37 *	YWA2SA0796B4	060 632 4654 8	Mounting angle, C (x4)
M38 *	YWA2SA0804B4	060 632 4638 8	Mounting angle, B (x2)
M39	YWA2PA0102C4	060 600 1623 5	Insulator (x4)
M40 *	YWA2PA0138A4	060 600 1603 9	Insulator (x4)
M43	YWA6GA0072B3	060 630 1283 7	Plate, Jack
M44	YWA1KA0030A4	005 513	Washer, jack (x2)

SYMBOL NO.	PART NO.	PART CODE	DESCRIPTION	
VOLUME A CIRCUIT BOARD				
VR801	YWAVRA0060A4	001 174 7595 7	Variable resistor	
VOLUME B CIRCUIT BOARD				
VR851	YWAVRA0060A4	001 174 4595 7	Variable resistor	
LED A CIRCUIT BOARD				
D801	LN031335PH	001 032 8687 1	LED	
LED B CIRCUIT BOARD				
D851	LN031335PH	001 032 8687 1	LED	
JACK A CIRCUIT BOARD				
R101,102	ER025CKF1002	001 151 2497 5	Metal film	(x2)
C103,104	YWUP05S330JN	001 103 5186 5	Ceramic	(x2)
JK801	HLJ052101010	003 400 4361 0	Jack	
JACK B CIRCUIT BOARD				
R401,402	ER025CKF1002	001 151 2497 5	Metal film	(x2)
C403–404	YWUP05S330JN	001 103 5186 5	Ceramic	
SW851	YWSSSB343NS	003 431 3518 8	Slide switch	
JK851	HLJ052101010	003 400 4361 0	Jack	
CN851-JM	YWB3BXHA	003 403 2836 9	Connector	
CN852-JM	YWB6BXHA	003 403 4263 6	Connector	
POWER LED CIRCUIT BOARD				
D891	LN217RP	001 032 0270 4	LED	
M41	YWE8010FR02	060 643 0109 3	LED spacer	
FUSE CIRCUIT BOARD				
E4	YWH00171	003 415 1633 6	Holder	(x4)
M42	YWA2QA0054A4	003 413 1318 4	Earth lug	(x4)

SYMBOL NO.	PART NO.	PART CODE	DESCRIPTION	
POWER SUPPLY CIRCUIT BOARD				
D701,702	YWEM1	001 032 4036 6	Diode	(x2)
D703,704	EM1Z	001 032 3274 8	Diode	(x2)
R701,702	ERQ1AJP330S	001 190 0652 1	Fuse resistor	(x2)
C701–704	YWR0A16V222M	001 123 1098 8	Electrolytic	(x4)
CN701-JM	YWB7BXHA	003 403 3431 2	Connector	
DRIVER A CIRCUIT BOARD				
IC102	YWMC5707	001 061 1236 9	IC	
IC201,251	YWBA4558DD	001 060 2195 2	IC	(x2)
IC101	YWMC8134	001 061 3731 1	IC	
IC252	YWTA7317P	001 060 6703 8	IC	
Q103	2SA968B-0Y	001 030 5624 8	Transistor	
Q205	2SB950A-QR	001 030 3098 6	Transistor	
Q251	2SC1567-QR	001 030 1013 5	Transistor	
Q104	YW2SC2238B0Y	001 030 5625 7	Transistor	
Q201,202	2SC2631-RS	001 030 2257 3	Transistor	
Q203	2SC828A-RS	001 030 1490 0	Transistor	
Q204	2SD1276A-QR	001 030 2838 8	Transistor	(x2)
D259,261	EM1Z	001 032 3274 8	Diode	(x2)
D109,110	YWHZS6R2EB2	001 032 9539 8	Diode	(x2)
D113,114,256	YWHZS2R7EB2	001 032 6027 9	Diode	(x3)
D205,206	YWHZS20EB1	001 032 9363 4	Diode	(x2)
D105,106	YWHZS39EB1	001 032 8518 7	Diode	(x2)
D202,251,252, 253,255,257	MA165	001 032 0494 0	Diode	(x6)
D101–104, 117,118,203, 204,258,260	MA167	001 032 4142 5	Diode	(x10)
D111,112,115, 116,201	YW1SS82	001 032 4290 4	Diode	(x5)
R123,126	ERD2FCG151	001 152 2728 4	Carbon	150Ω 2W (x2)
R271	ERD2FCG221	001 152 0192 2	Carbon	220Ω W
R218,219	ERG1SJ331	001 151 4153 8	Metal film	330Ω 1W (x2)
R266	ERG1SJ471	001 151 3795 4	Metal film	470Ω 1W
R263	ERG1SJ822	001 151 4760 1	Metal film	8.2KΩ 1W
R103,104	ERG12SJ432	001 151 6284 0	Metal film	4.3KΩ 1/2W (x2)
R105,106,270	ERG1SJ222	001 151 3592 3	Metal film	2.2KΩ 1W (x3)
R132,133	ERQ12HJ100	001 190 0036 9	Fuse resistor	10Ω 1/2W (x2)

SYMBOL NO.	PART NO.	PART CODE	DESCRIPTION
VR102	EVND4AA00B13	001 180 2564 8	Semifixed resistor
VR101	EVND4AA00B53	001 180 2319 9	Semifixed resistor
C127,128	ECCF2H330K	001 103 0920 9	Ceramic (x2)
C117	ECCD2H390J	001 103 4084 4	Ceramic
C122,124	ECCD2H820J2	001 103 3232 4	Ceramic (x2)
C254	ECEA0JS101	001 120 0150 0	Electrolytic
C252	ECEA1AN101S	001 120 2335 5	Electrolytic
C251	ECEA1CU100	001 120 2905 3	Electrolytic
C123	ECEA1CU101	001 120 2926 8	Electrolytic
C204	ECEA1HUR47S	001 120 0351 3	Electrolytic
C255	ECEA1HUR47	001 120 3249 8	Electrolytic
C202,203	ECEA1HU2R2	001 120 3253 2	Electrolytic
C207,208	ECEA1JU470	001 120 3613 8	Electrolytic 47 μF 63V (x2)
C103,104,107 108,125,126, 205,206	ECEA2AU100	001 120 4922 4	Electrolytic 10 μF 100V (x8)
C201	ECEA2AU4R7	001 120 3132 0	Electrolytic
C256	ECEA2AU470	001 120 3301 1	Electrolytic
C253	ECQB1H103Jz	001 106 3225 8	Plastic 0.01 μF (x2)
C111	ECQE1225KN	001 106 2328 6	Plastic
C118,119	WCQM1104KZ	001 106 0862 7	Plastic 0.1 μF (x2)
C101,102,115	ECQV1H104JZ	001 106 2671 7	Plastic 0.1 μF (x3)
C191,192	ECQV1H473JZ	001 106 2576 2	Plastic 0.047 μF 50V (x2)
C110	YWRBA10V221M	001 120 5400 1	Electrolytic 220 μF 10V
C116	YWRBA10V471M	001 120 5401 0	Electrolytic 470 μF 10V
C120,121	YWREC100V471	001 123 0097 9	Electrolytic 470 μF 100V (x2)
C112,114	YWUP05B561KN	001 103 8742 7	Ceramic (x2)
C113	YWUP05S220JN	001 103 5082 2	Ceramic
C105,106	ECEA2AU220E	001 120 5727 1	Electrolytic 22 μF 100V (x2)
RL251	AR39202	003 450 2628 0	Relay
CN102,202, 206-JM	YWB3BXHA	003 403 2836 9	Connector (x3)
CN203-JM	YWB3PVH	003 403 2871 6	Connector
CN101,104,201, 205-JM	YWB4BXHA	003 403 2872 5	Connector (x4)
CN204-JM	YWB5B-XHA	003 403 1876 5	Connector
CN103,105-JM	YWB6BXHA	003 403 4263 6	Connector (x2)
E	NO.18D	060 600 1611 9	Insulator (x2)
E	NO.24	060 600 1612 8	Insulator (x2)
E	YWS7	060 600 1444 6	Insulator (x2)

DRIVER B CIRCUIT BOARD

SYMBOL NO.	PART NO.	PART CODE	DESCRIPTION
IC402	YWMC5707	001 061 1236 9	IC
IC501,551	YWBA4558DX	001 060 2195 2	IC (x2)
IC401	YWMC8134	001 061 3731 1	IC
IC552	YWTA7317P	001 060 6703 8	IC
Q403	2SA968B-0Y	001 030 5624 8	Transistor
Q505	2SB950A-QR	001 030 3098 6	Transistor
Q551	2SC1567-QR	001 030 1013 5	Transistor
Q404	YW2SC2238B0Y	001 030 5625 7	Transistor
Q501,502,552	2SC2631-RS	001 030 2257 3	Transistor (x3)
Q503	2SC828A-RS	001 030 1490 0	Transistor
Q504,553	2SD1276A-QR	001 030 2838 8	Transistor (x2)
D559	EM1Z	001 032 3274 8	Diode
D566	YWHZS13EB2	001 032 5767 4	Diode
D409,410	YWHZS6R2EB2	001 032 9539 8	Diode (x2)
D565	HZS16EB2TD	001 032 4653 7	Diode
D413,414,556	YWHZS2R7EB2	001 032 6027 9	Diode (x3)
D505,506	YWHZS20EB1	001 032 9363 4	Diode (x2)
D405,406	YWHZS39EB1	001 032 8518 7	Diode (x2)
D554,502,551 552,555,557, 562,563	MA165	001 032 0494 0	Diode (x8)
D401–404, 417,418,503, 504,558,560	MA167	001 032 4142 5	Diode (x10)
D411,412,415, 416,501	YW1SS82	001 032 4290 4	Diode (x5)
R423,426	ERD2FCG151	001 152 2728 4	Carbon (x2)
R570,405,406	ERG1SJ222	001 151 3592 3	Metal film (x3)
R518,519	ERG1SJ331	001 151 4153 8	Metal film (x2)
R566	ERG1SJ471	001 151 3795 4	Metal film
R563	ERG1SJ822	001 151 4760 1	Metal film 8.2KΩ 1W
R578	ERG12SJ622	001 151 6285 9	Metal film 6.2KΩ 1/2W
R403,404	ERG12SJ432	001 151 6284 0	Metal film 4.3KΩ 1/2W (x2)
R432,433	ERQ12HJ100	001 190 0036 9	Fuse resistor 10Ω 1/2W (x2)
VR402	EVND4AA00B13	001 180 2564 8	Semifixed resistor
VR401	EVND4AA00B53	001 180 2319 9	Semifixed resistor
C558	ECCD2H101J2	001 103 0733 0	Ceramic
C427,428	ECCF2H330K	001 103 0920 9	Ceramic (x2)
C417	ECCD2H390J	001 103 4084 4	Ceramic

SYMBOL NO.	PART NO.	PART CODE	DESCRIPTION
C422,424	ECCD2H820J2	001 103 3232 4	Ceramic
C554	ECEA0JS101	001 120 0150 0	Electrolytic
C552	ECEA1AN101S	001 120 2335 5	Electrolytic
C551	ECEA1CU100	001 120 2905 3	Electrolytic
C423	ECEA1CU101	001 120 2926 8	Electrolytic
C504	ECEA1HNR47S	001 120 0351 3	Electrolytic
C555	ECEA1HUR47	001 120 3249 8	Electrolytic
C502,503	ECEA1HU2R2	001 120 3253 2	Electrolytic 2.2 μF 50V (x2)
C507,508	ECEA1JU470	001 120 3613 8	Electrolytic (x2)
C403,404,407, 408,425,426, 505,506	ECEA2AU100	001 120 4922 4	Electrolytic 10 μF 100V (x8)
C501	ECEA2AU4R7	001 120 3132 0	Electrolytic
C559	ECEA2AU470	001 120 3301 1	Electrolytic
C553	ECQB1H103JZ	001 106 3225 8	Plastic 0.01 μF
C411	ECQE1225KN	001 106 2328 6	Plastic
C418,419	ECQM1104KZ	001 106 0862 7	Plastic 0.1 μF (x2)
C401,402,415, 557	ECQV1H104JZ	001 106 2571 7	Plastic (x4)
C491,492	ECQV1H473JZ	001 106 2576 2	Plastic 0.047 μF 50V (x2)
C410	YWRBA10V221M	001 120 5400 1	Electrolytic 220 μF 10V
C416	YWRBA10V471M	001 120 5401 0	Electrolytic 470 μF 10V
C420,421	YWREC100V471	001 123 1097 9	Electrolytic 470 μF 100V (x2)
C412,414	YWUP05B561KN	001 103 8742 7	Ceramic (x2)
C413	YWUP05S220JN	001 103 5082 2	Ceramic
C405,406	ECEA2AU220E	001 120 5727 1	Electrolytic 22 μF 100V (x2)
RL551	AR39202	003 450 2628 0	Relay
CN402,505, 507-JM	YWB3BXHA	003 403 2836 9	Connector (x3)
CN503-JM	YWB3PVH	003 403 2871 6	Connector
CN401,404,501, 502-JM	YWB4BXHA	003 403 2872 5	Connector (x4)
CN504-JM	YWB5B-XHA	003 403 1876 5	Connector
CN403,405-JM	YWB6BXHA	003 403 4263 6	Connector (x2)
E	NO.18D	060 600 1611 9	Insulator (x2)
E	No.24	060 600 1612 8	Insulator (x2)
E	YWS7	060 600 1444 6	Insulator (x2)

POWER A CIRCUIT BOARD

SYMBOL NO.	PART NO.	PART CODE	DESCRIPTION
Q303,316	2SA1127-ST	001 030 2341 8	Transistor (x2)
Q302	2SC2634-ST	001 030 2326 7	Transistor
D305-308	EM1Z	001 032 3274 8	Diode (x4)
D309	YWHZS6R8EB2	001 032 4362 5	Diode
D301,302	MA165	001 032 0494 0	Diode (x2)
D303,304,310	YW1SS82	001 032 4290 4	Diode (x3)
R310	ERD2FCG331	001 152 0194 0	Fuse resistor
R331	ERG1SJ223	001 151 4756 7	Metal film
R332	ERX3SJ4R7	001 151 4471 7	Metal film
R333–336	ERX3SJ2R7	001 151 5115 0	Metal film (x7)
R317,318	ERF5GEKR27N		Wirewound 0.27Ω 5W (x2)
C313	ECCD2H680J2	001 103 0771 4	Ceramic
C304,305	ECEA1HN2R2S	001 120 0356 8	Electrolytic 2.2 μF 50V (x2)
C308,309	ECEA2AU100	001 120 4922 4	Electrolytic 10 μF 100V (x2)
C302,303	ECQB1H222JZ	001 106 3400 1	Plastic (x2)
C310	ECQF2333KZ	001 106 2908 2	Plastic
C311,312	ECQM1H104KZ	001 106 0862 7	Plastic 0.1 μF (x2)
C301	ECQV1H104JZ	001 106 2571 7	Plastic 0.1 μF
L301 *	YWALCA0022A4	001 211 2849 8	Coil
CN303-JM	YWB6PSVH	003 403 2704 0	Connector
E	YVL437TM027	003 410 3376 1	Terminal (x3)

POWER B CIRCUIT BOARD

SYMBOL NO.	PART NO.	PART CODE	DESCRIPTION
Q603,616	2SA1127-ST	001 030 2341 8	Transistor (x2)
Q602	2SC2634-ST	001 030 2326 7	Transistor
D605–608	EM1Z	001 032 3274 8	Diode (x4)
D609	YWHZS6R8EB2	001 032 4362 5	Diode
D601,602	MA165	001 032 0494 0	Diode (x2)
D603,604,610	YW1SS82	001 032 4290 4	Diode (x3)
R610	ERD2FCG331	001 152 0194 0	Fuse resistor
R617,618	ERF5GEKR27N	001 150 2764 0	Wirewound (x2)
R631	ERG1SJ223	001 151 4756 7	Metal film
R632	ERX3SJ4R7	001 151 4471 7	Metal film
R633–636	ERX3SJ2R7	001 151 5115 0	Metal film (x4)
C613	ECCD2H680J2	001 103 0771 4	Ceramic
C604,605	ECEA1HN2R2S	001 120 0356 8	Electrolytic (x2)
C608,609	ECEA2AU100	001 120 4922 4	Electrolytic 10 μ 100V (x2)
C602,603	ECQB1H222JZ	001 106 3400 1	Plastic (x2)
C610	ECQF2333KZ	001 106 2908 2	Plastic
C611,612	ECQM1104KZ	001 106 0862 7	Plastic 0.1 μF (x2)
C601	ECQV1H104JZ	001 106 2571 7	Plastic 0.1 μF
L601 *	YWALCA0022A4	001 211 2849 8	Coil
CN603	YWB6PSVH	003 403 2704 0	Connector
E	YVL437TM027	003 410 3376 1	Terminal (x3)

SYMBOL NO.	PART NO.	PART CODE	DESCRIPTION
ACCESSORIES/PACKING			
M60	YWA8QA0796AN	060 983 2402 8	Operating instructions
M61	YWT20X35C03	060 978 0259 6	Polyethylene bag, power cord
M62	YWA8EA0045A4	060 978 0349 5	Polyethylene bag, main body
M63	YWT10X16C03	060 978 0054 7	Polyethylene bag
M64	XZB26X40C05	060 978 0045 8	Polyethylene bag
M65	YWP9100EHA1	060 971 2363 4	Packing ass'y
M66	YW5H1V42	060 650 0552 7	Clip canoe
M67	YWA3AA0071B4	060 612 0384 9	Dust proof parts, fan filter

SYMBOL NO.	PART NO.	PART CODE	DESCRIPTION
WP-9220E			
MISCELLANEOUS			
Q307,607	2SA1006B-PQ	001 030 0196 7	Transistor (x2)
Q309,311,313, 315,609,611, 613,615	2SA1216M0Y	001 030 4856 8	Transistor (x8)
Q305,605	2SB718-CD	001 030 5873 3	Transistor (x2)
Q306,606	2SC2336B-PQ	001 030 1275 5	Transistor (x2)
Q308,310,312, 314,608,610, 612,614	2SC2922M0Y	001 030 4857 7	Transistor (x8)
Q301,601	2SD1265-PQ	001 030 4860 2	Transistor (x2)
Q304,604	2SD758-CD	001 030 5874 2	Transistor (x2)
TH301,601	YWTH487BF471	001 191 0642 8	Thermistor (x2)
TH1 ⚠	ERPF3B2M101A	001 241 0347 5	Thermistor
C1 ⚠	YWL0B80V203P	001 123 1096 0	Electrolytic
C2,3	ECQU2A333MN		Plastic 0.033 μF 100V (x2)
T1 ⚠	YWPIEE3E039	001 202 8104 9	Power transformer
SW1 ⚠	ESB99887V	003 435 5111 9	Push switch
SW2	ESE37202	003 439 0700 4	Switch, voltage select
F1,2 ⚠	XBA2E150NS1	002 380 1293 4	Current fuse, 125V 15A (x2)
D1 ⚠	YW25G4B41	001 032 8471 5	Rectifier
R1 ⚠	ERF20HMJ101	001 150 0297 4	Wirewound 100Ω 2W
JK802,852	YW2506AJ3	003 400 4518 7	Jack (x2)
CN901,951-JF	YWWAKA331AL	003 403 3792 0	XLR type connector (x2)
CN902,952-JM	YWWAKA3-32	003 403 1869 4	XLR type connector (x2)
E1 ⚠	YWTN040A	003 410 7677 5	Terminal (x2)
E2 ⚠	YWAACA0002A4	003 490 5172 5	AC power cord
E3	YWUB0029	003 410 3351 0	Terminal for GND
E5	YWM20016P2UL	003 410 4265 3	2 pin terminal
E6	YW820731	060 600 1605 7	Capacitor cover (x2)
M1 *	YWA5WA0566D1	060 840 3181 4	Panel, front
M2 *	YWA5WC0568A2	060 840 3272 2	Panel, grille, ventilation opening
M3 *	YWA5WC0567A2	060 840 3272 2	Panel, rear
M4 *	YWA5EA0297B2	060 845 1019 6	Panel, upper
M5 *	YWA2KB0257A1		Chassis
M6 *	YWA5RA0127A3	060 700 0991 1	Knob, volume (x2)
M7 *	YWA6AA0012A3	060 705 0122 3	Handle (x2)
M8 *	YWA6JA0009A3	060 702 0089 2	Button, power switch
M9	YWA6JA0027A2	060 702 0140 6	Button, power switch guard

SYMBOL NO.		PART NO.	PART CODE	DESCRIPTION
M10	*	YWA2QA0059C4	003 413 1511 5	Earth lug
M11		YWA2SA0672C4	060 632 4665 5	Mounting angle, slide switch
M12	*	YWA2SA0797B3	060 632 4538 1	Mounting angle, fan
M13	*	YWA2SB0798A3	060 632 4753 6	Mounting angle, power switch Ach
M14	*	YWA2SA0799C3	060 632 4712 5	Mounting angle, volume Bch
M15	*	YWA2SA0805B4	060 632 4642 2	Mounting angle, fixing PCB angle (x2)
M16	*	YWA3BA0043A4	060 632 4499 1	Reinforcement angle (x4)
M17	*	YWA5LA0027C4	060 828 0160 3	Rubber foot, rear (x4)
M18	*	YWFF-001	060 828 0128 3	Rubber foot (x4)
M19	*	YWA2HA0215A4	060 601 0453 4	Shield parts, power switch
M20		YWA2PA0156A4	060 600 1624 4	Insulator, transformer (x2)
M21		YWA7SA0689A4	060 862 2167 4	Label, ground
M22		YWA4JA0115A4	060 726 0434 3	Spring, power switch
M23	*	YWA3AA0072B4	060 612 0382 1	Dust proof parts, fan filter
M24	*	YWA7QB0885A4	060 861 5765 1	Main label
M25		YWA7SA0443A4	060 862 1814 0	Label, fuse caution
M26	*	YWA7SA0686A4	060 862 2166 5	Label, caution
M27	*	YWA7SA0678A4	060 862 2168 3	Label, fuse (x2)
M28		YWV240PUB01E	060 862 1186 5	Label, serial No.
M29		FBH12G24LB	002 311 4999 2	Fan 24V DC 0.3A
M30		YWCS4	060 645 0205 4	Cord clamp (x5)
M31		YWNK5N	060 645 0195 9	Cord clamp (x2)
M32		YWSR6W-1	060 645 0047 0	Cord clamp
M34		YWA2SA0673A4	060 632 4532 7	Mounting angle, fixing TR (x4)
M35	*	YWA2SA0796B4	060 632 4654 8	Mounting angle, C (x6)
M36	*	YWA2SA0800B4	060 632 4636 0	Mounting angle, A (x2)
M37	*	YWA2SA0801B4	060 632 4637 9	Mounting angle (x2)
M38		YWA2PA0102C4	060 600 1623 5	Insulator (x4)
M39	*	YWA2PA0102C4	060 600 1603 9	Insulator (x4)
M42		YWA6GA0072B3	060 630 1283 7	Plate, jack
M43		YWA1KA0030A4	005 513 4235 1	Washer, jack (x2)

VOLUME A CIRCUIT BOARD

VR801	YWARA0060A4	001 174 7595 7	Variable resistor

VOLUME B CIRCUIT BOARD

VR851	YWAVRA0060A4	001 174 7595 7	Variable resistor

LED A CIRCUIT BOARD

D801	LN31335PH	001 032 8687 1	LED

SYMBOL NO.	PART NO.	PART CODE	DESCRIPTION

LED B CIRCUIT BOARD

D851	LN031335PH	001 032 8687 1	LED

JACK A CIRCUIT BOARD

R101,102	ER025CKF1002	001 151 0586 3	Metal film (x2)
C103,104	YWUP05S330JN	001 103 5186 5	Ceramic (x2)
JK801	HLJ052101010	003 400 4361 0	Jack

JACK B CIRCUIT BOARD

R401,402	ER025CKF1002	001 151 2497 5	Metal film (x2)
C403–404	YWUP05S330JN	001 103 5186 5	Ceramic (x2)
SW851	YWSSSB343NS	003 431 3518 8	Slide switch
JK851	HLJ052101010	003 400 4361 0	Jack
CN851-JM	YWB3BXHA	003 403 2836 9	Connector
CN852-JM	YWB6BXHA	003 403 4263 6	Connector

POWER LED CIRCUIT BOARD

D891	LN217RP	001 032 0270 4	LED
M40	YWE8010FR02	060 643 0109 3	LED spacer

FUSE CIRCUIT BOARD

E4	YWH00171	003 415 1633 6	Holder (x4)
M41	YWA2QA0054A4	003 413 1318 4	Earth lug (x4)

POWER SUPPLY CIRCUIT BOARD

D701,702	YWEM1	001 032 4036 6	Diode (x2)
D703,704	EM1Z	001 032 3274 8	Diode (x2)
R701,702	ERQ1AJP330S	001 190 0652 1	Fuse resistor (x2)
C701–704	YWR0A16V222M	001 123 1098 8	Electrolytic (x4)
CN701-JM	YWB7BXHA	003 403 3431 2	Connector

DRIVER A CIRCUIT BOARD

IC102	YWMC5707	001 061 1236 9	IC
IV201,251	YWBA4558DX	001 060 2195 2	IC (x2)
IC101	YWMC8134	001 061 3731 1	IC
IC252	YWTA7317P	001 060 6703 8	IC
Q102	2SA794-QR	001 030 2698 2	Transistor

SYMBOL NO.	PART NO.	PART CODE	DESCRIPTION	
Q103	2SA968B-0Y	001 030 5624 8	Transistor	
Q205	2SB950A-QR	001 030 3098 6	Transistor	
Q251	2SC1567-QR	001 030 1013 5	Transistor	
Q104	YW2SC2238B0Y	001 030 5625 7	Transistor	
Q201,202	2SC2631-RS	001 030 2257 3	Transistor	(x2)
Q203	2SC828A-RS	001 030 1490 0	Transistor	
Q204	2SD1276A-QR	001 030 2838 8	Transistor	
D259,261	EM1Z	001 032 3274 8	Diode	(x2)
D109,110	YWHZS6R2EB2	001 032 9539 8	Diode	(x2)
D113,114 256	YWHZS2R7EB2	001 032 6027 9	Diode	(x3)
D205,206	YWHZS20EB1	001 032 9363 4	Diode	(x2)
D105,106	YWHZS39EB1	001 032 8518 7	Diode	(x2)
D202,251,252, 253,255,257	MA165	001 032 0494 0	Diode	(x6)
D101-104,117, 118,203,204, 258,260	MA167	001 032 4142 5	Diode	(x10)
D111,112,115, 116,201	YW1SS82	001 032 4290 4	Diode	(x5)
R123,126	ERD2FCG151	001 152 2728 4	Fuse resistor	150Ω (x2)
R271	ERD2FCG221	001 152 0192 2	Fuse resistor	220Ω
R266	ERG1SJ122P	001 151 3076 8	Metal film	
R263	ERG1SJ123P	001 151 3077 7	Metal film	
R270	ERG1SJ302P	001 151 6001 5	Metal film	
R218,219	ERG2SJ751P	001 151 6002 4	Metal film	(x2)
R103,104	ERG12SJ622	001 151 6285 9	Metal film	6.2KΩ 1/2W (x2)
R105,106	ERG1SJ362	001 151 6280 4	Metal film	3.6KΩ 1W (x2)
R132,133	ERQ12HJ100	001 190 0036 9	Fuse resistor	(x2)
VR102	EVND4AA00B13	001 180 2564 8	Semifixed resistor	
VR101	EVND4AA00B53	001 180 2319 9	Semifixed resistor	
C117	ECCD2H270J	001 103 0750 9	Ceramic	
C127,128	ECCF2H330K	001 103 0920 9	Ceramic	(x2)
C122,124	ECCD2H820J2	001 103 3232 4	Ceramic	(x2)
C254	ECEA0JS101	001 120 0150 0	Electrolytic	
C252	ECEA1AN101S	001 120 2335 5	Electrolytic	
C251	ECEA1CU100	001 120 2905 3	Electrolytic	
C123	ECEA1CU101	001 120 2926 8	Electrolytic	
C204	ECEA1HNR47S	001 120 0351 3	Electrolytic	
C255	ECEA1HUR47	001 120 3249 8	Electrolytic	
C203,202	ECEA1HU2R2	001 120 3253 2	Electrolytic	2.2 μF 50V (x2)
C207,208	ECEA1JU470	001 120 3613 8	Electrolytic	47 μF 63V (x2)

SYMBOL NO.	PART NO.	PART CODE	DESCRIPTION	
C103,104,107, 108,125,126, 205,206	ECEA2AU100	001 120 4922 4	Electrolytic	10 μF 100V (x8)
C201	ECEA2AU4R7	001 120 3132 0	Electrolytic	
C256	ECEA2AU470	001 120 3301 1	Electrolytic	
C253	ECQB1H103JZ	001 106 3225 8	Plastic	0.01 μF
C111	ECQE1225KN	001 106 2328 6	Plastic	
C118,119	ECQM1104KZ	001 106 0862 7	Plastic	0.1 μF (x2)
C101,102,115	ECQV1H104JZ	001 106 2571 7	Plastic	(x3)
C191,192	ECQV1H473JZ	001 106 2576 2	Plastic	0.047 μF 50V (x2)
C110	YWRBA10V221M	001 120 5400 1	Electrolytic	220 μF 10V
C116	YWRBA10V471M	001 120 5401 0	Electrolytic	470 μF 10V
C120,121	YWREC100V471	001 123 1097 9	Electrolytic	470 μF 100V (x2)
C112,114	YWUP05B561KN	001 103 8742 7	Ceramic	(x2)
C113	YWUP05S220JN	001 103 5082 2	Ceramic	
C105,106	ECEA2AU220E	001 120 5727 1	Ceramic	22 μF 100V (x2)
RL251	AR39202	003 450 2628 0	Relay	
CN102,202, 206-JM	YWB3BXHA	003 403 2836 9	Connector	(x3)
CN203-JM	YWB3PVH	003 403 2871 6	Connector	
CN101,104,201, 205-JM	YWB4BXHA	003 403 2872 5	Connector	(x4)
CN204-JM	YWB5B-XHA	003 403 1876 5	Connector	
CN103,105-JM	YWB6BXHA	003 403 4263 6	Connector	(x2)
E	NO.18D	060 600 1611 9	Insulator	(x2)
E	NO.24	060 600 1612 8	Insulator	(x2)
E	YWS7	060 600 1444 6	Insurator	(x2)

DRIVER B CIRCUIT BOARD

IC402	YWMC5707	001 061 1236 9	IC	
IC501,551	YWBA4558DD	001 060 2195 2	IC	(x2)
IC401	YWMC8134	001 061 3731 1	IC	
IC552	YWTA7317P	001 060 6703 8	IC	
Q402	2SA794-QR	001 030 2698 2	Transistor	
Q403	2SA968B-0Y	001 030 5624 8	Transistor	
Q505	2SB950A-QR	001 030 3098 6	Transistor	
Q551	2SC1567-QR	001 030 1013 5	Transistor	
Q404	YW2SC2238B0Y	001 030 5625 7	Transistor	
Q501,502,552	2SC2631-RS	001 030 2257 3	Transistor	(x3)
Q503	2SC828A-RS	001 030 1490 0	Transistor	
Q504,553	2SD1276A-QR	001 032 2838 8	Transistor	
D559	EM1Z	001 032 3274 8	Diode	

SYMBOL NO.	PART NO.	PART CODE	DESCRIPTION
D566	YWHZS12EB2	001 032 5570 5	Diode
D409,410	YWHZS6R2EB2	001 032 9539 8	Diode (x2)
D565,567	YWHZS16EB2	001 032 4653 7	Diode (x2)
D413,414,556	YWHZS2R7EB2	001 032 6027 9	Diode (x3)
D505,506	YWHZS20EB1	001 032 9363 4	Diode (x2)
D405,406	YWHZS39EB1	001 032 8518 7	Diode (x2)
D554,502,551, 552,555,557, 562,563	MA165	001 032 0494 0	Diode (x8)
D401–404, 417,418,503, 504,558,560	MA167	001 032 4142 5	Diode (x10)
D411,412,415, 416,501	YW1SS82	001 032 4290 4	Diode (x5)
R423,426	ERD2FCG151	001 152 2728 4	Fuse resistor 150Ω (x2)
R566	ERG1SJ122P	001 151 3076 8	Metal film
R563	ERG1SJ123P	001 151 3077 7	Metal film
R570	ERG1SJ302P	001 151 6001 5	Metal film
R518,519	ERG2SJ751P	001 151 6002 4	Metal film (x2)
R578	ERG12SJ153		Metal film 15KΩ 1/2W
R403,404	ERG12SJ622	001 151 6285 9	Metal film 6.2KΩ 1/2W (x2)
R405,406	ERG1SJ362	001 151 6280 4	Metal film 3.6KΩ 1W (x2)
R432,433	ERQ12HJ100	001 190 0036 9	Fuse resistor (x2)
VR402	EVND4AA00B13	001 180 2564 8	Semifixed resistor
VR401	EVND4AA00B53	001 180 2319 9	Semifixed resistor
C558	ECCD2H101J2	001 103 0733 0	Ceramic
C417	ECCD2H270J	001 103 0750 9	Ceramic
C427,428	ECCF2H330K	001 103 0920 9	Ceramic (x2)
C422,424	ECCD2H820J2	001 103 3232 4	Ceramic (x2)
C554	ECEA0JS101	001 120 0150 0	Electrolytic
C552	ECEA1AN101S	001 120 2335 5	Electrolytic
C551	ECEA1CU100	001 120 2905 3	Electrolytic
C423	ECEA1CU101	001 120 2926 8	Electrolytic
C504	ECEA1HNR47S	001 120 0351 3	Electrolytic
C555	ECEA1HUR47	001 120 3249 8	Electrolytic
C503,550	ECEA1HU2R2	001 120 3253 2	Electrolytic 2.2 μF 50V (x2)
C507,508	ECEA1JU470	001 120 3613 8	Electrolytic 47 μF 63V (x2)
C403,404,407 408,425,426, 505,506	ECEA2AU100	001 120 4922 4	Electrolytic 10 μF 100V (x8)
C501	ECEA2AU4R7	001 120 3132 0	Electrolytic
C559	ECEA2AU470	001 120 3301 1	Electrolytic

SYMBOL NO.	PART NO.	PART CODE	DESCRIPTION
C553	ECQB1H103JZ	001 106 3225 8	Plastic 0.01 μF
C411	ECQE1225KN	001 106 2328 6	Plastic
C418,419	ECQM1104KZ	001 106 0862 7	Plastic 0.1 μF (x2)
C401,402,415, 557	ECQV1H104JZ	001 106 2571 7	Plastic (x4)
C491,492	ECQV1H473JZ	001 106 2576 2	Plastic 0.047 μF 50V (x2)
C410	YWRBA10V221M	001 120 5400 1	Electrolytic 220 μF 10V
C416	YWRBA10V471M	001 120 5401 0	Electrolytic 470 μF 10V
C420,421	YWREC100V471	001 123 1097 9	Electrolytic 470 μF 10V
C412,414	YWUP05B561KN	001 103 8742 7	Ceramic (x2)
C413	YWUP05S220JN	001 103 5082 2	Ceramic
C405,406	ECEA2AU220E	001 120 5727 1	Electrolytic 22 μF 100V (x2)
RL551	AR39202	003 450 2628 0	Relay
CN402,505, 507-JM	YWB3BXHA	003 403 2836 9	Connector (x3)
CN503-JM	YWB3PVH	003 403 2871 6	Connector
CN401,404, 501,502-JM	YWB4BXHA	003 403 2872 5	Connector (x4)
CN504-JM	YWB5B-XHA	003 403 1876 5	Connector
CN403,405-JM	YWB6BXHA	003 403 4263 6	Connector (x2)
E	NO.18D	060 600 1611 9	Insulator (x2)
E	NO.24	060 600 1612 8	Insulator (x2)
E	YWS7	060 600 1444 6	Insulator (x2)

POWER A CIRCUIT BOARD

Q303,316	2SA1127-ST	001 030 2341 8	Transistor (x2)
Q302	2SC2634-ST	001 030 2326 7	Transistor
D305–308	EM1Z	001 030 3274 8	Diode (x4)
D309	YWHZS6R8EB2	001 032 4362 5	Diode
D301,302	MA165	001 032 0494 0	Diode (x2)
D303,304,310	YW1SS82	001 032 4290 4	Diode (x3)
R310	ERD2FCG331	001 152 6194 0	Fuse resistor
R317,318	ERF5GEKR27N	001 150 2703 3	Wirewound (x2)
R331	ERG1SJ223	001 151 4756 7	Metal film
R332	ERX3SJ4R7	001 151 4471 7	Metal film
R333–339	ERX3SJ5R1P	001 151 6004 2	Metal film (x7)
C313	ECCD2H680J2	001 103 0771 4	Ceramic
C304,305	ECEA1HN2R2S	001 120 0356 8	Electrolytic (x2)
C308,309	ECEA2AU100	001 120 4922 4	Electrolytic 10 μF 100V (x2)
C302,303	ECQB1H222JZ	001 106 3400 1	Plastic (x2)
C310	ECQF2333KZ	001 106 2908 2	Plastic 0.1 μF (x2)
C311,312	ECQM1104KZ	001 106 0862 7	Plastic 0.1 μF (x2)

SYMBOL NO.	PART NO.	PART CODE	DESCRIPTION
C301	ECQV1H104JZ	001 106 2571 7	Plastic 0.1 μF (x2)
L301	YWALCA0022A4	001 211 2849 8	Coil
CN303	YWB6PSVH	003 403 2704 0	Connector
E	YVL437TM027	003 410 3376 1	Terminal (x3)
POWER B CIRCUIT BOARD			
Q603,616	2SA1127-ST	001 030 2341 8	Transistor (x2)
Q602	2SC2634-ST	001 030 2326 7	Transistor
D605–608	EM1Z	001 032 3274 8	Diode (x4)
D609	YWHZS6R8EB2	001 032 4362 5	Diode
D601,602	MA165	001 032 0494 0	Diode (x2)
D603,604,610	YW1SS82	001 032 4290 4	Diode (x3)
R610	ERD2FCG331	001 152 0194 0	Fuse resistor
R617,618	ERF5GEKR27N	001 150 2703 3	Wirewound (x2)
R631	ERG1SJ223	001 151 4756 7	Metal film
R632	ERX3SJ4R7	001 151 4471 7	Metal film
R633–639	ERX3SJ5R1P	001 151 6004 2	Metal film (x7)
C613	ECCD2H680J2	001 103 0771 4	Ceramic
C604,605	ECEA1HN2R2S	001 120 0356 8	Electrolytic (x2)
C608,609	ECEA2AU100	001 120 4922 4	Electrolytic 10 μF 100V (x2)
C602,603	ECQB1H222JZ	001 106 3400 1	Plastic (x2)
C610	ECQF2333KZ	001 106 2908 2	Plastic
C611,612	ECQM1104KZ	001 106 0862 7	Plastic 0.1 μF (x2)
C601	ECQV1H104JZ	001 106 2571 7	Plastic 0.1 μF
L601	YWALCA0022A4	001 211 2849 8	Coil
CN603-JM	YWB6PSVH	003 403 2704 0	Connector
E	YVL437TM027	003 410 3376 1	Terminal (x3)
POWER TRANSISTOR A CIRCUIT BOARD			
R325,326	ERF5GEKR27N	001 150 2703 3	Wirewound (x2)
C306,307	ECQM1104KZ	001 106 0862 7	Plastic 0.1 μF (x2)
CN351-JM	YWB6PSVH	003 403 2704 0	Connector
POWER TRANSISTOR B CIRCUIT BOARD			
R625,626	ERF5GEKR27N	001 150 2703 3	Wirewound (x2)
C606,607	ECQM1104KZ	001 106 0862 7	Plastic 0.1 μF (x2)
CN651-JM	YWB6PSVH	003 403 2704 0	Connector

SYMBOL NO.	PART NO.	PART CODE	DESCRIPTION
ACCESSORIES/PACKING			
M60	YWA8QA0796AN	060 983 2402 8	Operating instructions
M61	YWT20X35C03	060 978 0259 6	Polyethylene bag, power cord (x2)
M62	YWA8EA0045A4	060 978 0349 5	Polyethylene bag, main board
M63	YWT10X16C03	060 978 0054 7	Polyethylene bag, screws
M64	XZB26X40C05	060 978 0045 8	Polyethylene bag, O/I
M65	YWP9220EHA1	060 971 2364 3	Packing ass'y
M66	YW5H1V42	060 650 0552 7	Clip, canoe (x4)
M67	YWA3AA0072B4	060 612 0382 1	Dust proof parts, fan filter

Note: When ordering carbon film resistors check the resistance value on the schematic diagram and refer to the part number below.

Explanation of Part Number

1	2	3		4	5	6	7	8	9	10
E	R	D	–	S	2	T	J	1	0	3

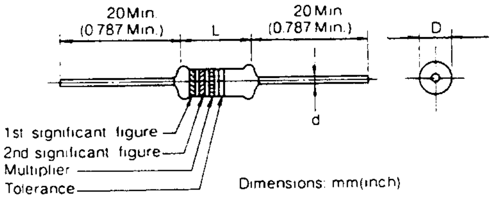
Common Code
Fixed Carbon Film Resistors

Rated Power at 70°C. amb.	
Code	R. Power
S1	0.5 (1/2W)
S2	0.25(1/4W)

Special Feature and/or Cut & Formed style (Type)	
Code	Feature
T	Standard (Straight leads)
F	Flame Retardant (Straight leads)
V	Radial Taped

Nominal Resistance Value
The first two digits are significant figures of resistance and the third one denotes number of zeros following. Decimal point is expressed by R as 4.7Ω=4R7

Resistance Tolerance	
Code	Tol.
J	±5%


20Min.
(0.787 Min.)
L
20Min.
(0.787 Min.)
D
d
1st significant figure
2nd significant figure
Multiplier
Tolerance
Dimensions: mm(inch)

Note:

The above example shows a standard fixed carbon film resistor, 0.5(1/2) W power rating, resistance value of 10K ohms, tolerance of 5% and package of taped(26mm) & Box.